LONESOME LAKE PIERCE COUNTY

LATITUDE 47* 0'19" LONGITUDE 121*39'47" T18N-R9E-33
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.36 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 4840. FT | | |
| LAKE AREA | 7. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 120. ACRE-FT | | |
| MEAN DEPTH | 17. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 42. FT | | |
| SHORELINE LENGTH | 0.40 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.40 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 6.7 % | FOREST OR UNPRODUCTIVE | 97 % |
| BASIN GEOLOGY | IGNEOUS | LAKE SURFACE | 3 % |
| INFLOW | INTERMITTENT | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

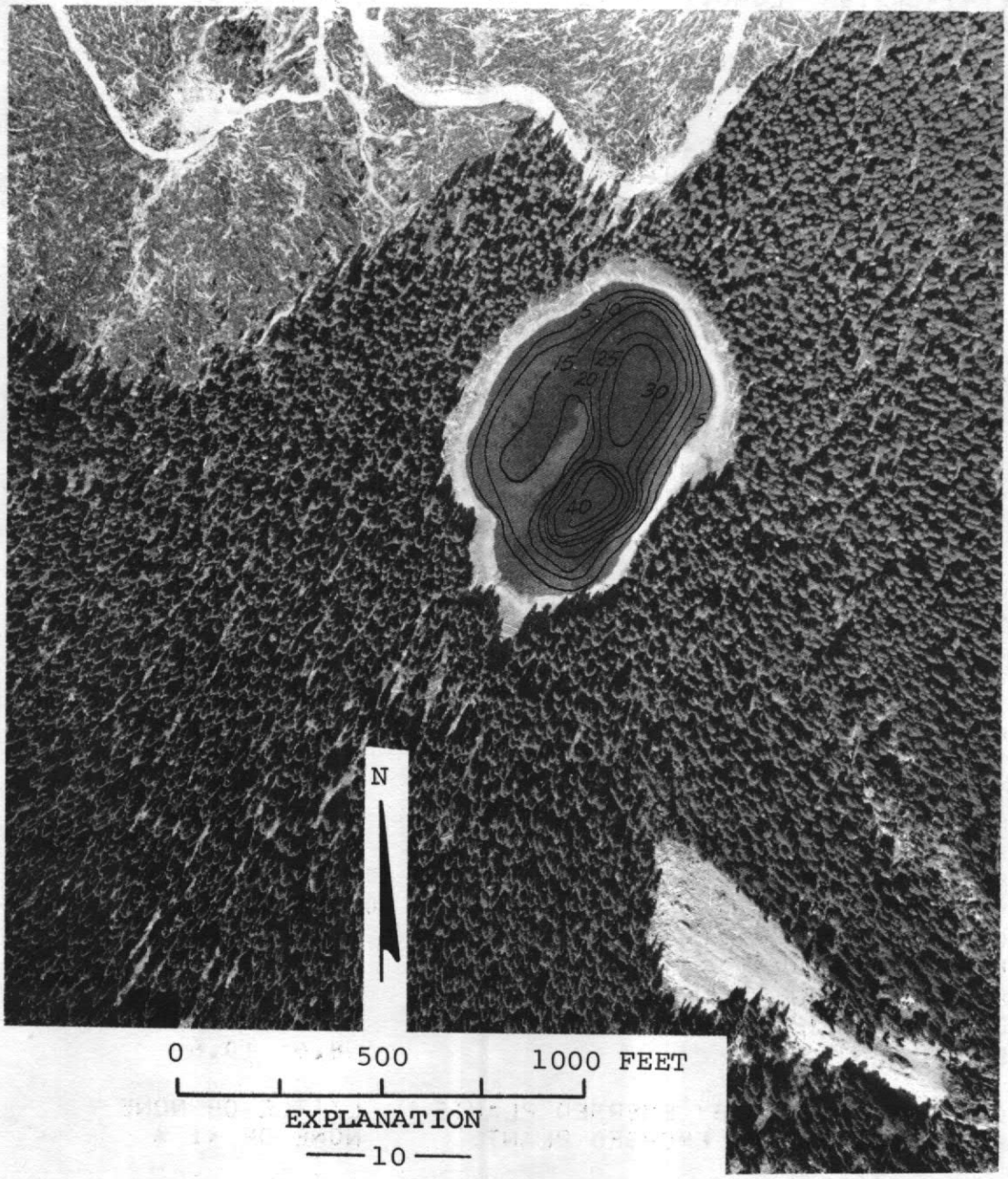
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/ 9/73 | |
| TIME | 1330 | 1335 |
| DEPTH (FT) | 3. | 39. |
| TOTAL NITRATE (N) | 0.00 | 0.00 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.01 | 0.02 |
| TOTAL ORGANIC NITROGEN (N) | 0.01 | 0.04 |
| TOTAL PHOSPHORUS (P) | 0.002 | 0.013 |
| TOTAL ORTHOPHOSPHATE (P) | 0.002 | 0.003 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 17 | 17 |
| WATER TEMPERATURE (DEG C) | 17.1 | 9.1 |
| COLOR (PLATINUM-COBALT UNITS) | 0 | 0 |
| SECCHI-DISC VISIBILITY (FT) | >42 | |
| DISSOLVED OXYGEN | 8.6 | 10.6 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | LITTLE OR NONE |
| LAKE SURFACE COVERED BY EMERSED PLANTS | NONE OR <1 % |

| | |
|---|---|
| DATE | 8/ 9/73 |
| TIME | 1340 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MEAN (COL./100ML) | <1 |

REMARKS

NO EMERSED OR SUBMERSED AQUATIC PLANTS WERE OBSERVED. THE LAKE STAGE WAS NOTICEABLY LOWER THAN NORMAL.




Lonesome Lake, Pierce County. Bathymetric map from U.S. Geological Survey, August 28, 1973. Aerial photo, August 3, 1973.

LOST LAKE PIERCE COUNTY

LATITUDE 47° 2'41" LONGITUDE 131°27'36" T18N-R11E-18
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 3.30 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 3985. FT | | |
| LAKE AREA | 15. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 150. ACRE-FT | | |
| MEAN DEPTH | 10. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 19. FT | | |
| SHORELINE LENGTH | 0.65 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.2 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.54 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 2.1 % | FOREST OR UNPRODUCTIVE | 99 % |
| BASIN GEOLOGY | IGNEOUS | LAKE SURFACE | 1 % |
| INFLOW | INTERMITTENT | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

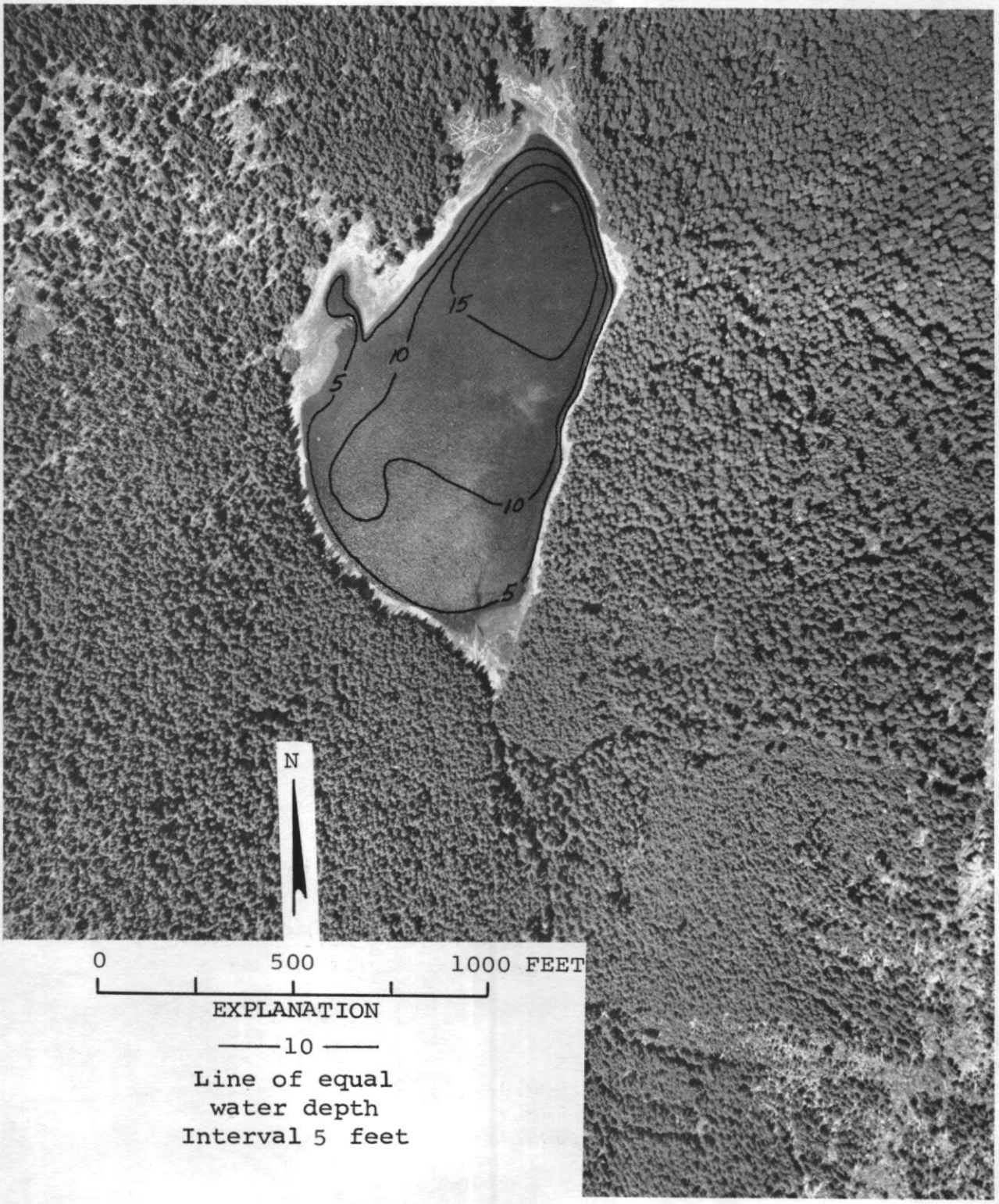
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/ 9/73 | |
| TIME | 1105 | 1110 |
| DEPTH (FT) | 3. | 10. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.05 | 0.05 |
| TOTAL ORGANIC NITROGEN (N) | 0.06 | 0.04 |
| TOTAL PHOSPHORUS (P) | 0.018 | 0.009 |
| TOTAL ORTHOPHOSPHATE (P) | 0.004 | 0.003 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 53 | 55 |
| WATER TEMPERATURE (DEG C) | 17.0 | 16.6 |
| COLOR (PLATINUM-COBALT UNITS) | 5 | 10 |
| SECCHI-DISC VISIBILITY (FT) | >14 | |
| DISSOLVED OXYGEN | 8.0 | 8.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | LITTLE OR NONE |
| LAKE SURFACE COVERED BY EMERSED PLANTS | NONE OR <1 % |

| | |
|---|---|
| DATE | 8/ 9/73 |
| TIME | 1115 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MEAN (COL./100ML) | <1 |

REMARKS

A SHALLOW HIGH-ALTITUDE LAKE. NO EMERSED OR SUBMERSED AQUATIC PLANTS WERE OBSERVED. DELTA DEPOSITS HAVE FORMED AT THE INFLOWS. THE LITTORAL BOTTOM IN LOCAL AREAS IS COMPOSED OF MUCK. THE LAKE STAGE WAS NOTICEABLY LOWER THAN NORMAL.




Lost Lake, Pierce County. Bathymetric map from U.S. Geological Survey, August 28, 1973. Aerial photo, July 14, 1973.

LOUISE LAKE PIERCE COUNTY

LATITUDE 47° 9'36" LONGITUDE 122°34' 0" T19N-R2E-4
PUGET SOUND BASIN

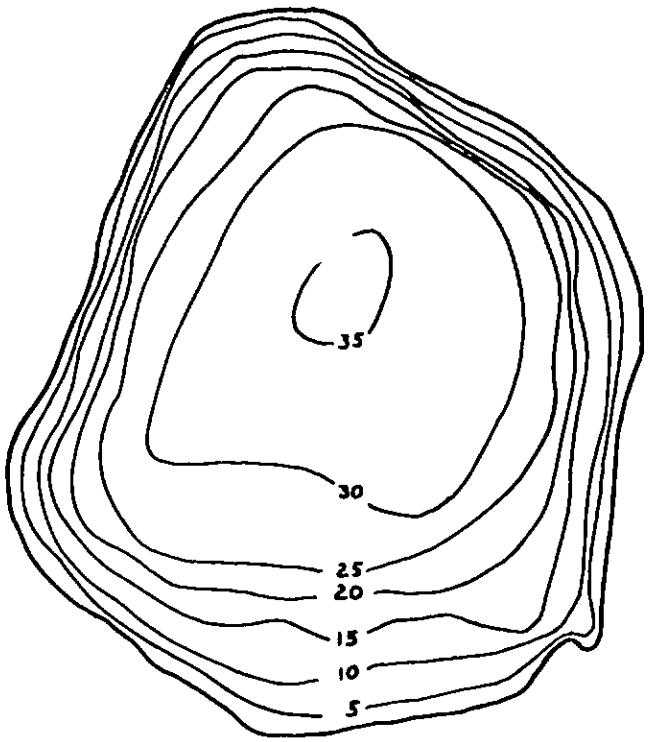
| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.34 SQ MI | RESIDENTIAL DEVELOPMENT | 100 % |
| ALTITUDE | 230. FT | | |
| LAKE AREA | 39. ACRES | NUMBER OF NEARSHORE HOMES | 74 |
| LAKE VOLUME | 860. ACRE-FT | | |
| MEAN DEPTH | 22. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 35. FT | | |
| SHORELINE LENGTH | 0.91 MI | RESIDENTIAL URBAN | 8 % |
| SHORELINE CONFIGURATION | 1.0 | RESIDENTIAL SUBURBAN | 41 % |
| DEVELOPMENT OF VOLUME | 0.63 | AGRICULTURAL | 21 % |
| BOTTOM SLOPE | 2.4 % | FOREST OR UNPRODUCTIVE | 12 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 18 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | ABSENT | PUBLIC BOAT ACCESS TO LAKE | -- |

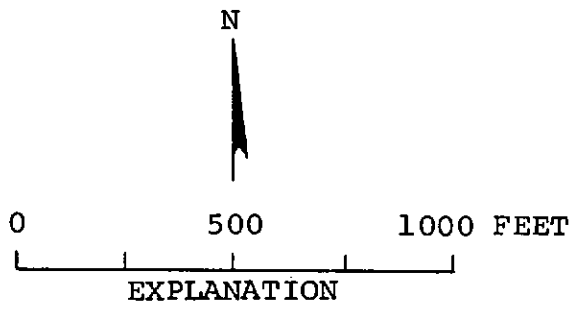
WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

| | | |
|---|---|---|
| SAMPLE SITE | 1 | |
| DATE | 6/18/73 | |
| TIME | 1450 | 1500 |
| DEPTH (FT) | 3. | 28. |
| TOTAL NITRATE (N) | 0.04 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.03 | 0.14 |
| TOTAL ORGANIC NITROGEN (N) | 0.12 | 0.03 |
| TOTAL PHOSPHORUS (P) | 0.009 | 0.024 |
| TOTAL ORTHOPHOSPHATE (P) | 0.002 | 0.002 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 74 | 74 |
| WATER TEMPERATURE (DEG C) | 18.0 | 13.2 |
| COLOR (PLATINUM-COBALT UNITS) | 5 | 10 |
| SECCHI-DISC VISIBILITY (FT) | 20 | |
| DISSOLVED OXYGEN | 9.4 | 2.0 |
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 11- 25 % | |
| LAKE SURFACE COVERED BY EMERSED PLANTS | NONE OR <1 % | |
| DATE | 6/18/73 | |
| TIME | 1530 | |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 | |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 3 | |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 18 | |
| FECAL COLIFORM, MEAN (COL./100ML) | 16 | |

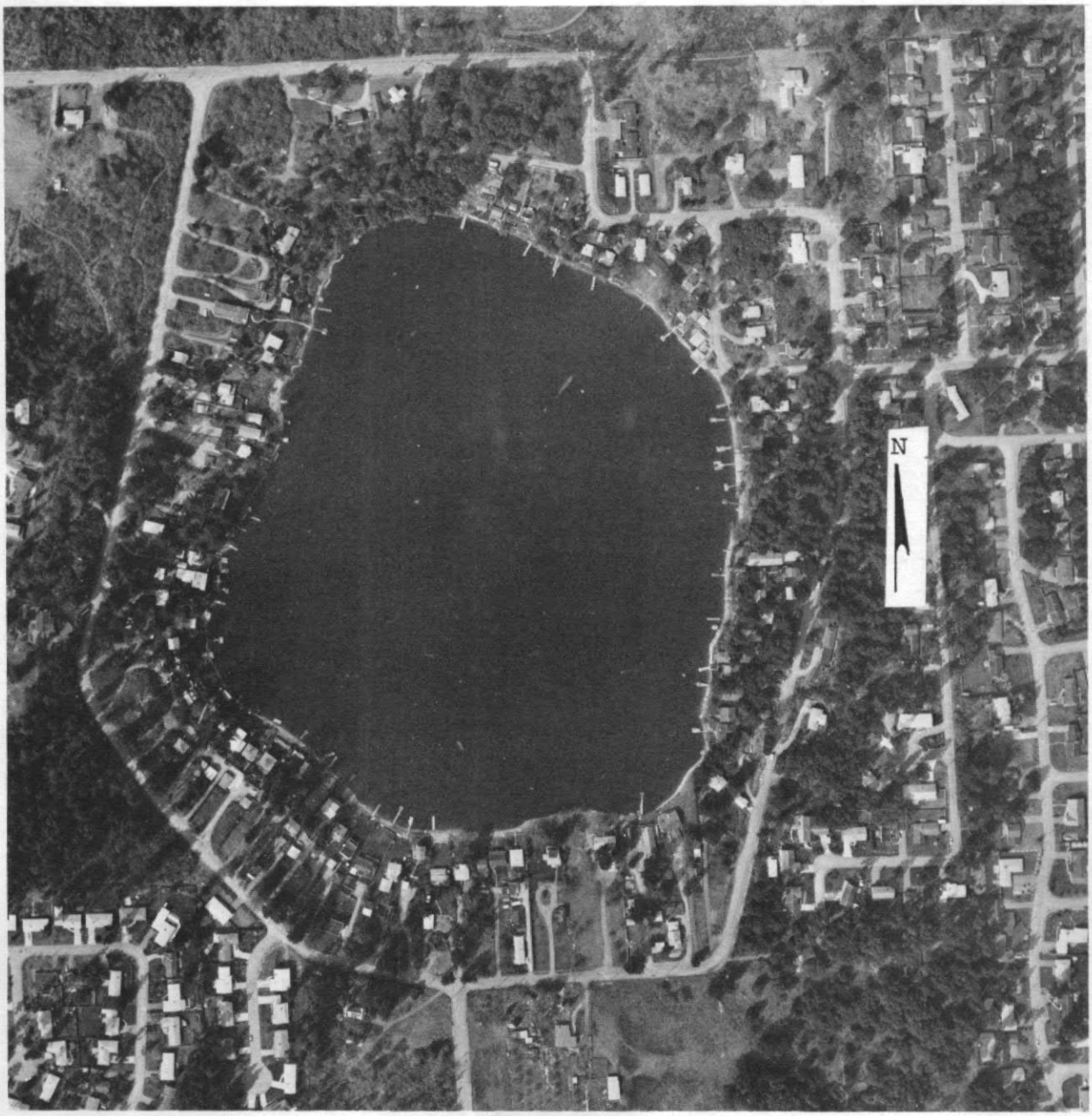
REMARKS

A SMALL LAKE LOCATED SOUTHWEST OF TACOMA IN A PARTIALLY URBAN DRAINAGE BASIN. THE GRAVEL AND COBBLE LITTORAL BOTTOM SUPPORTED RELATIVELY FEW EMERSED PLANTS, BUT APPROXIMATELY 65 PERCENT OF THE LAKE BOTTOM WAS COVERED BY SUBMERSED PLANTS (MOSTLY PONDWEED). THE TACOMA-PIERCE COUNTY HEALTH DEPARTMENT REPORTED OCCASIONAL HIGH COLIFORM-BACTERIA COUNTS FOR THE LAKE DURING THE SUMMER OF 1972. IN 1973 THE U.S. GEOLOGICAL SURVEY SAMPLED THE LAKE FOUR TIMES. THE PLANT SURVEY WAS MADE ON AUGUST 6, 1973.




Louise Lake, Pierce County. From Washington Department of Game, June 5, 1950.




Louise Lake, Pierce County. April 3, 1973. Approx. scale 1:4800.

MINTERWOOD LAKE PIERCE COUNTY

LATITUDE 47*21'17" LONGITUDE 122*44' 7" T22N-R1E-31
PUGET SOUND BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.14 SQ MI | RESIDENTIAL DEVELOPMENT | 22 % |
| ALTITUDE | 152. FT | | |
| LAKE AREA | 22. ACRES | NUMBER OF NEARSHORE HOMES | 7 |
| LAKE VOLUME | 160. ACRE-FT | | |
| MEAN DEPTH | 7. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 10. FT | | |
| SHORELINE LENGTH | 1.1 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.7 | RESIDENTIAL SUBURBAN | 9 % |
| DEVELOPMENT OF VOLUME | 0.74 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 0.91 % | FOREST OR UNPRODUCTIVE | 66 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 25 % |
| INFLOW | NOT DETERMINED | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

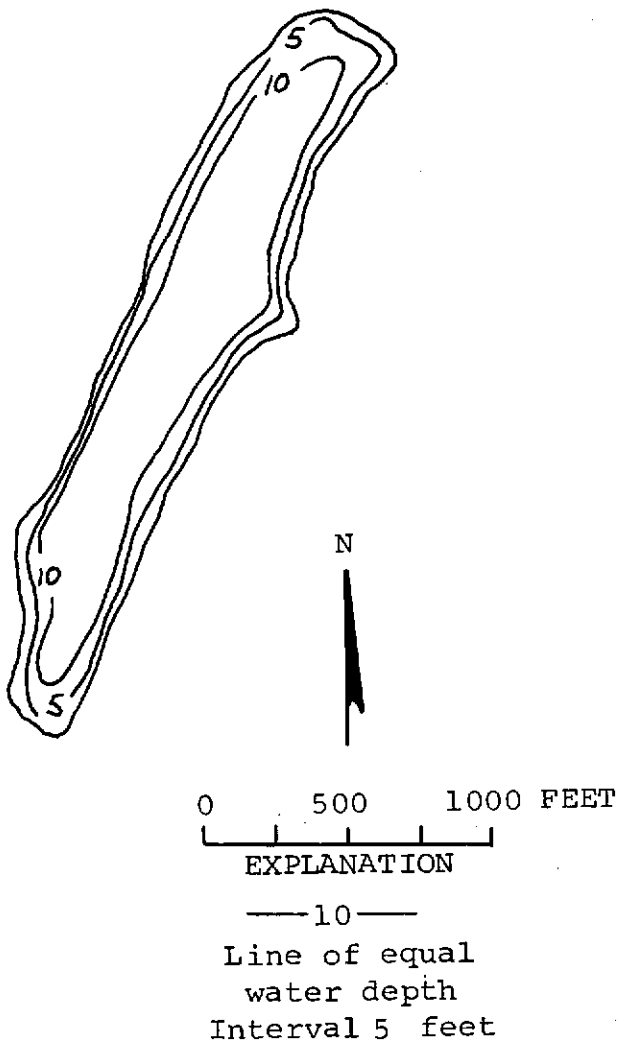
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/27/74 | |
| TIME | 1500 | 1505 |
| DEPTH (FT) | 2. | 7. |
| TOTAL NITRATE (N) | 0.00 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.11 | 0.13 |
| TOTAL ORGANIC NITROGEN (N) | 0.42 | 0.56 |
| TOTAL PHOSPHORUS (P) | 0.037 | 0.053 |
| TOTAL ORTHOPHOSPHATE (P) | 0.005 | 0.005 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 65 | 65 |
| WATER TEMPERATURE (DEG C) | 22.0 | 22.0 |
| COLOR (PLATINUM-COBALT UNITS) | 15 | 15 |
| SECCHI-DISC VISIBILITY (FT) | > 8 | |
| DISSOLVED OXYGEN | 8.2 | 8.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 0/ 0/ 0 |
| TIME | 0 |
| NUMBER OF FECAL COLIFORM SAMPLES | 0 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | -- |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | -- |
| FECAL COLIFORM, MEAN (COL./100ML) | -- |

REMARKS

AN ARTIFICIAL LAKE CREATED FOR RESIDENTIAL AND RECREATIONAL DEVELOPMENT. THE OUTLET IS A BOX-CULVERT OVERFLOW. EMERSED PLANTS COVERED THE SHORELINE IN BOTH A THIN BAND AND IN SCATTERED BEDS. SUBMERSED PLANTS (PONDWEED) COVERED MUCH OF THE LAKE BOTTOM.




Minterwood Lake, Pierce County. From
U.S. Geological Survey, February 5, 1974.


Minterwood Lake, Pierce County. July 13, 1974. Approx. scale 1:4800.

MORGAN LAKE PIERCE COUNTY

LATITUDE 47* 0'48" LONGITUDE 122*13'41" T18N-R5E-30
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 1.20 SQ MI | RESIDENTIAL DEVELOPMENT | 3 % |
| ALTITUDE | 688. FT | | |
| LAKE AREA | 27. ACRES | NUMBER OF NEARSHORE HOMES | 1 |
| LAKE VOLUME | 310. ACRE-FT | | |
| MEAN DEPTH | 12. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 23. FT | | |
| SHORELINE LENGTH | 0.79 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.51 | AGRICULTURAL | 26 % |
| BOTTOM SLOPE | 1.9 % | FOREST OR UNPRODUCTIVE | 70 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 4 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/26/74 | |
| TIME | 1325 | 1330 |
| DEPTH (FT) | 3. | 13. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.01 | 0.01 |
| TOTAL AMMONIA (N) | 0.28 | 0.54 |
| TOTAL ORGANIC NITROGEN (N) | 2.8 | 0.81 |
| TOTAL PHOSPHORUS (P) | 0.029 | 0.050 |
| TOTAL ORTHOPHOSPHATE (P) | 0.026 | 0.033 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 52 | 78 |
| WATER TEMPERATURE (DEG C) | 19.3 | 10.7 |
| COLOR (PLATINUM-COBALT UNITS) | -- | -- |
| SECCHI-DISC VISIBILITY (FT) | 2 | |
| DISSOLVED OXYGEN | 10.8 | 0.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 11- 25 % |

| | |
|---|---|
| DATE | 8/26/74 |
| TIME | 1340 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 14 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 30 |
| FECAL COLIFORM, MEAN (COL./100ML) | 23 |

REMARKS

EMERSED AQUATIC PLANTS COVERED THE SHORELINE. THE LITTORAL BOTTOM IS SILTY MUCK. AN ALGAL BLOOM WAS OBSERVED AND HYDROGEN SULFIDE WAS DETECTED IN THE HYPOLIMNION.


Morgan Lake, Pierce County. Bathymetric map from U.S. Geological Survey, February 7, 1974. Aerial photo, May 24, 1970.

MUD LAKE PIERCE COUNTY

LATITUDE 46*55'18" LONGITUDE 122*18'32" T17N-R4E-33
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 1.37 SQ MI | RESIDENTIAL DEVELOPMENT | 6 % |
| ALTITUDE | 623. FT | | |
| LAKE AREA | 21. ACRES | NUMBER OF NEARSHORE HOMES | 1 |
| LAKE VOLUME | 180. ACRE-FT | | |
| MEAN DEPTH | 9. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 14. FT | | |
| SHORELINE LENGTH | 0.66 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.0 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.61 | AGRICULTURAL | 42 % |
| BOTTOM SLOPE | 1.3 % | FOREST OR UNPRODUCTIVE | 56 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 2 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

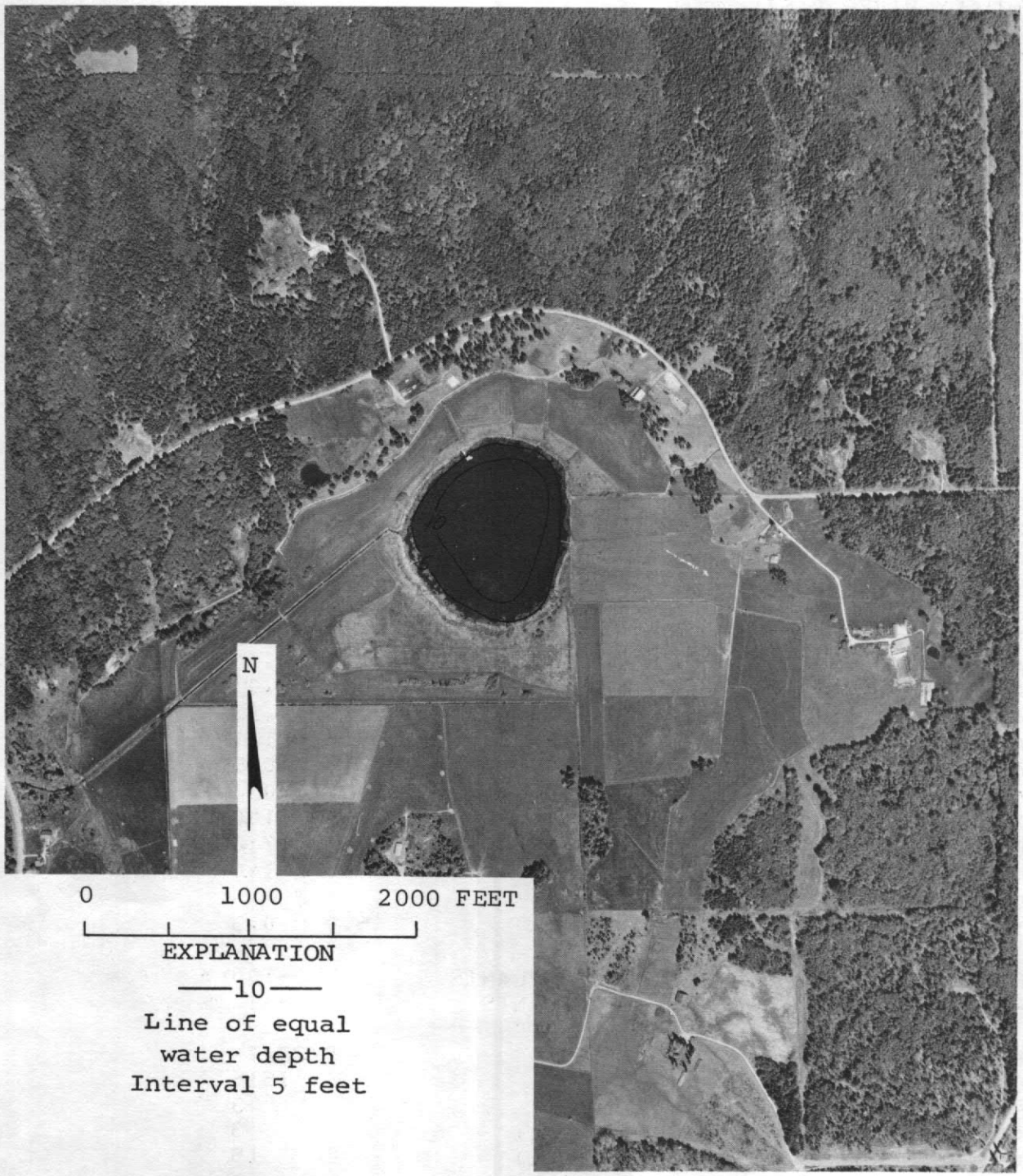
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/22/74 | |
| TIME | 1510 | 1515 |
| DEPTH (FT) | 3. | 7. |
| TOTAL NITRATE (N) | 0.00 | 0.00 |
| TOTAL NITRITE (N) | 0.01 | 0.01 |
| TOTAL AMMONIA (N) | 0.23 | 0.23 |
| TOTAL ORGANIC NITROGEN (N) | 1.5 | 1.1 |
| TOTAL PHOSPHORUS (P) | 0.12 | 0.085 |
| TOTAL ORTHOPHOSPHATE (P) | 0.031 | 0.036 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 100 | 100 |
| WATER TEMPERATURE (DEG C) | 17.3 | 17.0 |
| COLOR (PLATINUM-COBALT UNITS) | 160 | 140 |
| SECCHI-DISC VISIBILITY (FT) | 2 | |
| DISSOLVED OXYGEN | 5.0 | 0.3 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/22/74 |
| TIME | 1515 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 3 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 15 |
| FECAL COLIFORM, MEAN (COL./100ML) | 7 |

REMARKS

EMERSED PLANTS COVERED THE SHORELINE IN A THIN MARGIN AROUND THE LAKE. AN ALGAL BLOOM WAS OBSERVED. THE WATER IS BROWN COLOR. THE LITTORAL BOTTOM IS SILTY MUCK.




Mud Lake, Pierce County. Bathymetric map from U.S. Geological Survey, January 15, 1974. Aerial photo, May 16, 1970.

MUD MOUNTAIN LAKE PIERCE COUNTY

LATITUDE 0° 0' 0" LONGITUDE 0° 0' 0" T19N-R7E-17
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 400. SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 1070. FT | | |
| LAKE AREA | 340. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 19000. ACRE-FT | | |
| MEAN DEPTH | 54. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 170. FT | | |
| SHORELINE LENGTH | 6.9 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 2.6 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.33 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 3.8 % | FOREST OR UNPRODUCTIVE | 100 % |
| BASIN GEOLOGY | IGNEOUS | LAKE SURFACE | <1 % |
| INFLOW | PERENNIAL | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

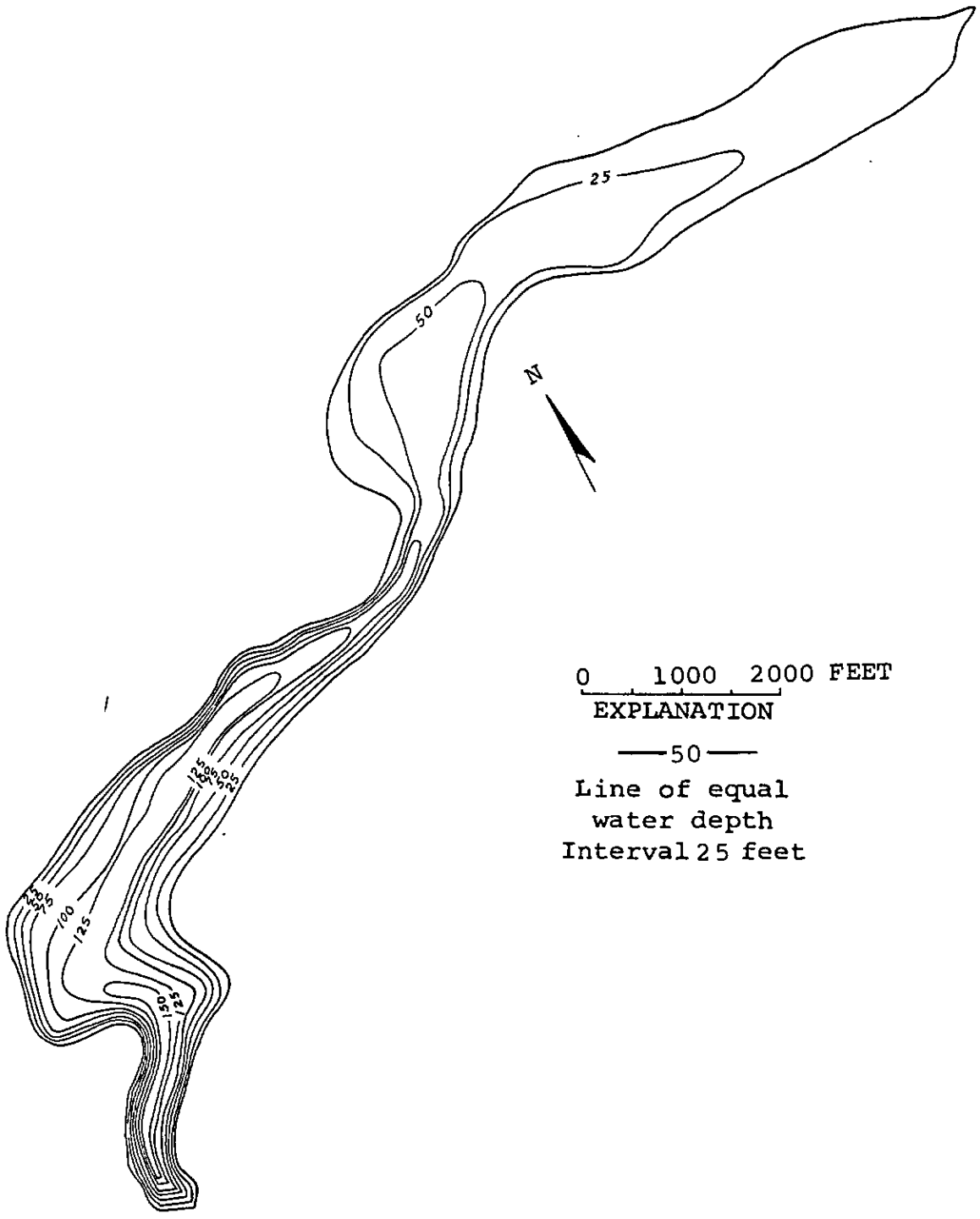
| SAMPLE SITE | 1 | | 2 | |
|---|---|---|---|---|
| DATE | 9/ 4/74 | | 9/ 4/74 | |
| TIME | 1510 | 1515 | 1600 | 1605 |
| DEPTH (FT) | 3. | 125. | 3. | 66. |
| TOTAL NITRATE (N) | 0.01 | 0.00 | 0.00 | 0.00 |
| TOTAL NITRITE (N) | 0.01 | 0.02 | 0.01 | 0.02 |
| TOTAL AMMONIA (N) | 0.13 | 0.27 | 0.16 | 0.25 |
| TOTAL ORGANIC NITROGEN (N) | 0.07 | -- | -- | -- |
| TOTAL PHOSPHORUS (P) | 0.046 | 0.10 | 0.058 | 0.10 |
| TOTAL ORTHOPHOSPHATE (P) | 0.040 | 0.093 | 0.053 | 0.087 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 42 | 50 | 42 | 49 |
| WATER TEMPERATURE (DEG C) | 16.8 | 12.7 | 16.9 | 13.2 |
| COLOR (PLATINUM-COBALT UNITS) | 0 | 0 | 5 | 5 |
| SECCHI-DISC VISIBILITY (FT) | 1 | | 1 | |
| DISSOLVED OXYGEN | 8.0 | 8.3 | 8.1 | 8.4 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | LITTLE OR NONE |
| LAKE SURFACE COVERED BY EMERSED PLANTS | NONE OR <1 % |

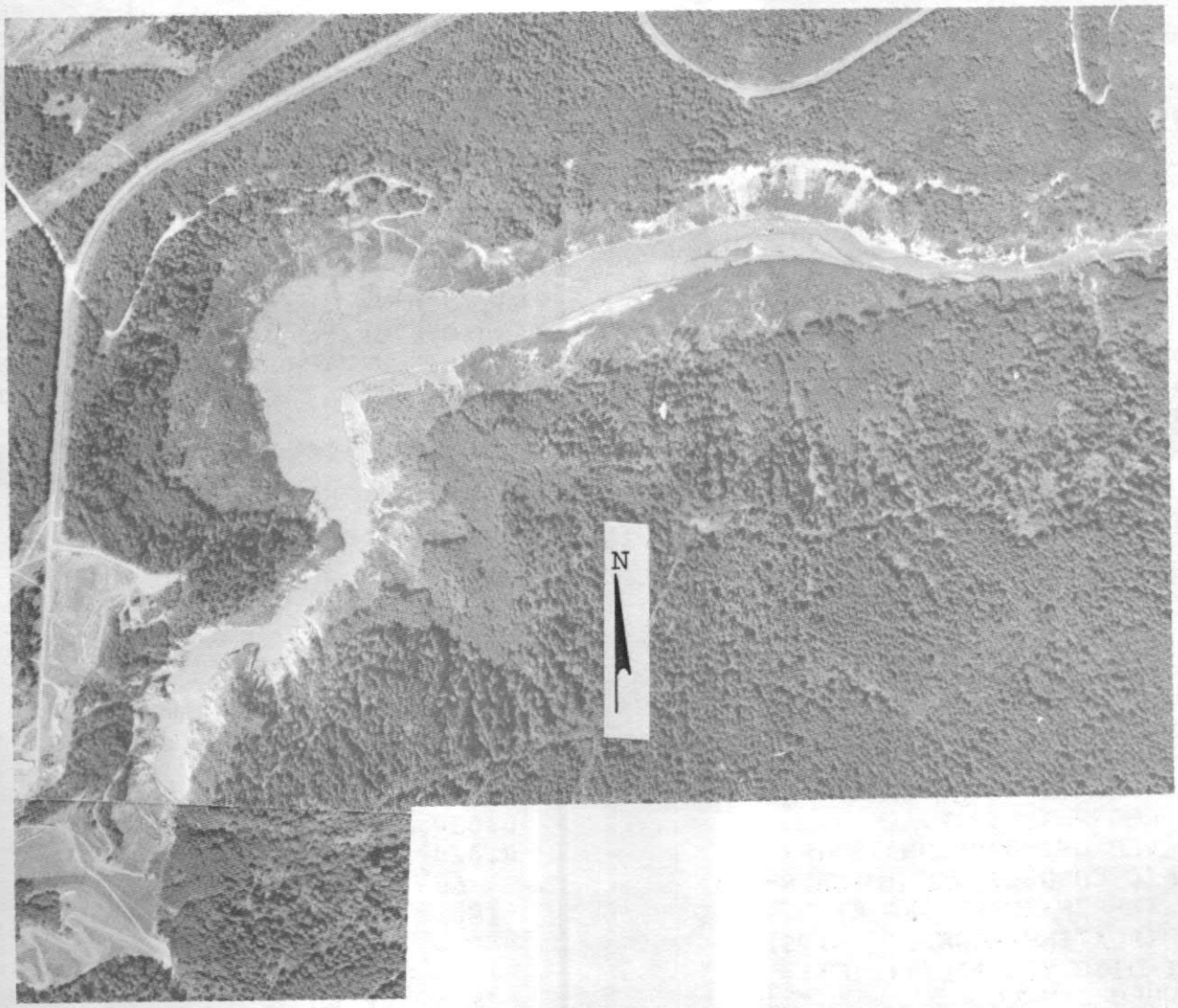
| | |
|---|---|
| DATE | 9/ 4/74 |
| TIME | 1430 |
| NUMBER OF FECAL COLIFORM SAMPLES | 4 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 2 |
| FECAL COLIFORM, MEAN (COL./100ML) | 2 |

REMARKS

A FLOOD-CONTROL RESERVOIR FORMED BY AN EARTHFILL DAM ON THE WHITE RIVER. THE STORAGE IS NOT RETAINED BUT IS DISSIPATED AS SOON AS POSSIBLE AFTER A FLOOD. THE BOUNDARY LINE BETWEEN PIERCE AND KING COUNTIES RUNS DOWN THE CENTER LINE OF THE LAKE. IN THE SUMMER THE WATER IS TURBID FROM GLACIAL SILT CARRIED BY THE WHITE RIVER FROM MT RAINIER GLACIERS. THE DO WAS AT NEAR SATURATION THROUGHOUT THE ENTIRE WATER COLUMN. FLOATING AND SUBMERGED LOGS WERE OBSERVED ALONG THE SHORELINE.




Mud Mountain Lake, Pierce County. From
U.S. Geological Survey, April 2, 1974.




Mud Mountain Lake, Pierce County. June 2, 1970. Approx. scale 1:12,000.

OHOP LAKE — PIERCE COUNTY

LATITUDE 46°53' 6" LONGITUDE 122°16'38" T16N-R4E-10
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 17.3 SQ MI | RESIDENTIAL DEVELOPMENT | 51 % |
| ALTITUDE | 524. FT | | |
| LAKE AREA | 230. ACRES | NUMBER OF NEARSHORE HOMES | 160 |
| LAKE VOLUME | 3800. ACRE-FT | | |
| MEAN DEPTH | 17. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 25. FT | | |
| SHORELINE LENGTH | 4.6 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 2.1 | RESIDENTIAL SUBURBAN | 1 % |
| DEVELOPMENT OF VOLUME | 0.66 | AGRICULTURAL | 5 % |
| BOTTOM SLOPE | 4.5 % | FOREST OR UNPRODUCTIVE | 92 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 2 % |
| INFLOW | PERENNIAL | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

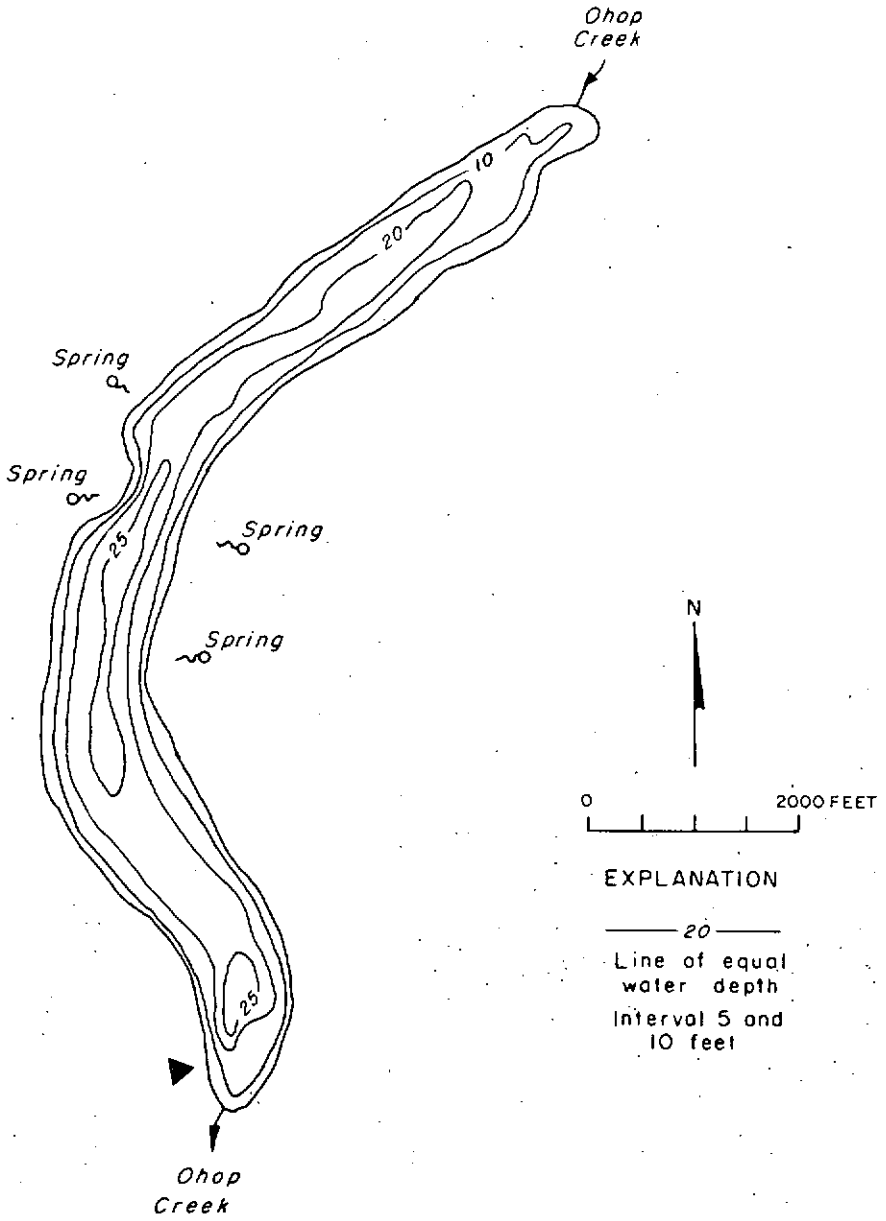
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 7/ 6/71 | |
| TIME | 1400 | 1405 |
| DEPTH (FT) | 3. | 16. |
| DISSOLVED NITRATE (N) | 0.01 | 0.06 |
| TOTAL NITRITE (N) | -- | -- |
| TOTAL AMMONIA (N) | 0.12 | 0.22 |
| TOTAL ORGANIC NITROGEN (N) | -- | -- |
| TOTAL PHOSPHORUS (P) | 0.030 | 0.040 |
| DISSOLVED ORTHOPHOSPHATE (P) | 0.020 | 0.020 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 65 | 74 |
| WATER TEMPERATURE (DEG C) | 18.1 | 12.5 |
| COLOR (PLATINUM-COBALT UNITS) | -- | -- |
| SECCHI-DISC VISIBILITY (FT) | 9 | |
| DISSOLVED OXYGEN | 8.9 | 1.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 26- 50 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/26/74 |
| TIME | 1145 |
| NUMBER OF FECAL COLIFORM SAMPLES | 4 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 7 |
| FECAL COLIFORM, MEAN (COL./100ML) | 4 |

REMARKS

THE LAKE WAS FORMED IN A VALLEY BEHIND A DAM COMPOSED OF THE DELTAIC DEPOSITS OF LYNCH CREEK. THE LAKE IS FED BY OHOP CREEK. THE LITTORAL ZONE IS MARSHY NEAR THE INFLOW AND OUTFLOW. THE MAJORITY OF THE MACROPHYTES OCCURRED NEAR THE INLET AND OUTLET OF THE LAKE. SEVERAL SPRINGS FROM THE STEEP HILLSIDES FLOW TO THE LAKE. THE FLUSHING RATE OF THE LAKE APPEARS TO BE HIGH. THE LITTORAL BOTTOM IS MOSTLY MUCK OR SILTY MUCK. IN 1972 THE U.S. GEOLOGICAL SURVEY SAMPLED THE LAKE FOUR TIMES. THE PLANT SURVEY WAS MADE ON SEPTEMBER 10, 1971. WATER-LEVEL OBVERATIONS HAVE BEEN MADE BY THE U.S. GEOLOGICAL SURVEY SINCE 1960.




Ohop Lake, Pierce County. From Washington Department of Game, June 14, 1954.


Ohop Lake, Pierce County. May 18, 1970. Approx. scale 1:15,000.

RAPJOHN LAKE PIERCE COUNTY

LATITUDE 46*54'29" LONGITUDE 122*20'22" T17N-R4E-31
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 1.33 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 632. FT | | |
| LAKE AREA | 56. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 550. ACRE-FT | | |
| MEAN DEPTH | 10. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 18. FT | | |
| SHORELINE LENGTH | 1.1 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.55 | AGRICULTURAL | 18 % |
| BOTTOM SLOPE | 1.0 % | FOREST OR UNPRODUCTIVE | 75 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 7 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

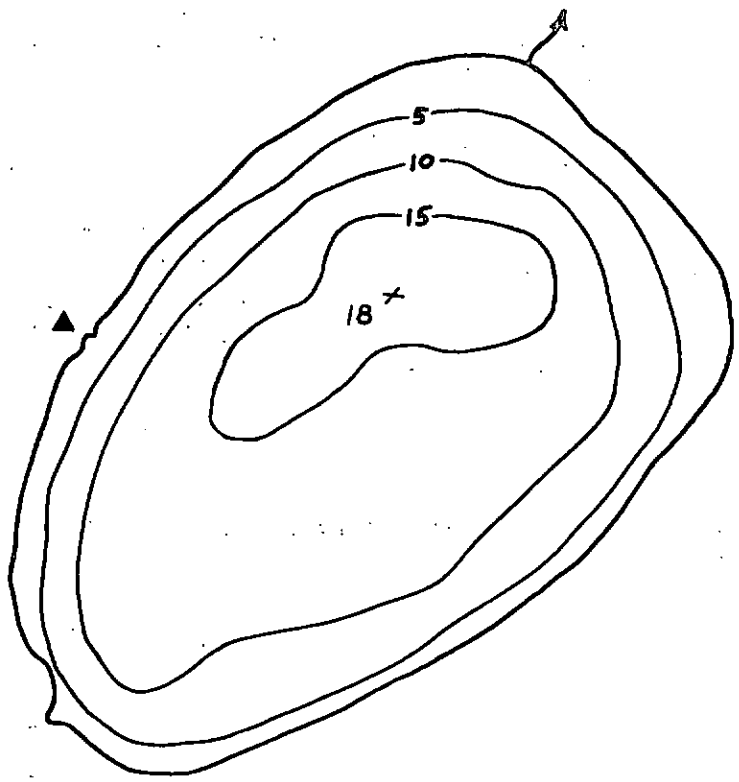
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/11/73 | |
| TIME | 1330 | 1335 |
| DEPTH (FT) | 3. | 10. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.01 | 0.01 |
| TOTAL AMMONIA (N) | 0.13 | 0.31 |
| TOTAL ORGANIC NITROGEN (N) | 0.87 | 0.60 |
| TOTAL PHOSPHORUS (P) | 0.024 | 0.052 |
| TOTAL ORTHOPHOSPHATE (P) | 0.011 | 0.017 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 80 | 85 |
| WATER TEMPERATURE (DEG C) | 21.0 | 17.8 |
| COLOR (PLATINUM-COBALT UNITS) | 55 | 70 |
| SECCHI-DISC VISIBILITY (FT) | 4 | |
| DISSOLVED OXYGEN | 8.7 | 0.2 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/11/73 |
| TIME | 1340 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 4 |
| FECAL COLIFORM, MEAN (COL./100ML) | 2 |

REMARKS

EMERSED PLANTS COVERED THE SHORELINE IN A THIN BAND AROUND THE LAKE. THE MUCK LITTORAL BOTTOM SUPPORTED A HEAVY COVER OF SUBMERSED PLANTS. THE WATER IS A TEA-BROWN COLOR.




N

0 500 1000 FEET

EXPLANATION

—10—
Line of equal
water depth
Interval 5 feet

Rapjohn Lake, Pierce County. From Washington Department of Game, date unknown.


Rapjohn Lake, Pierce County. April 3, 1973. Approx. scale 1:4800.

SEQUALITCHEW LAKE PIERCE COUNTY

LATITUDE 47* 6'46" LONGITUDE 122*36'54" T19N-R1E-24
PUGET SOUND BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 34.2 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 206. FT | | |
| LAKE AREA | 91. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 470. ACRE-FT | | |
| MEAN DEPTH | 5. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 11. FT | | |
| SHORELINE LENGTH | 2.5 MI | RESIDENTIAL URBAN | 15 % |
| SHORELINE CONFIGURATION | 1.9 | RESIDENTIAL SUBURBAN | 4 % |
| DEVELOPMENT OF VOLUME | 0.47 | AGRICULTURAL | 2 % |
| BOTTOM SLOPE | 0.49 % | FOREST OR UNPRODUCTIVE | 79 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | <1 % |
| INFLOW | INTERMITTENT | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

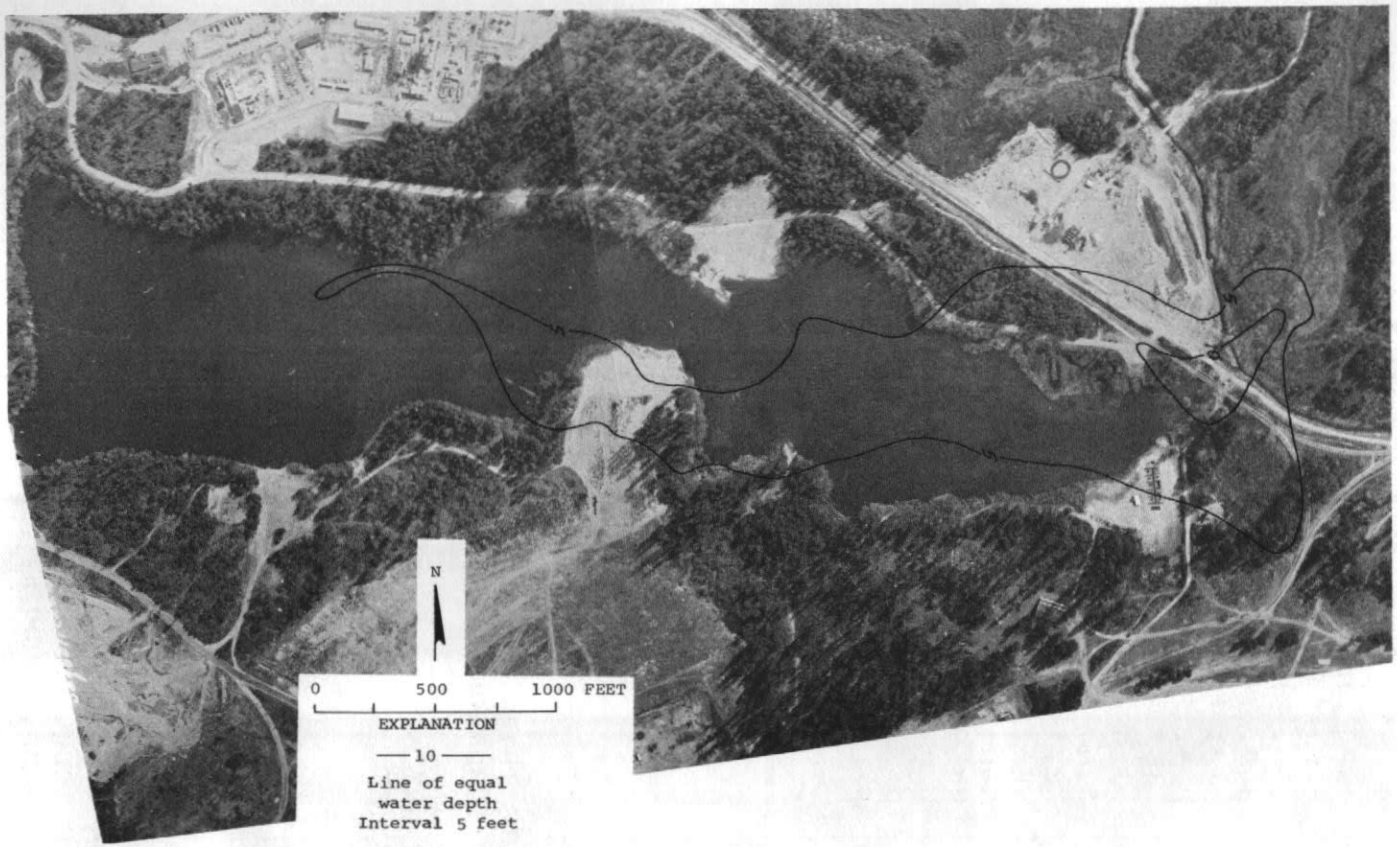
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1030 | 1035 |
| DEPTH (FT) | 3. | 6. |
| TOTAL NITRATE (N) | 0.00 | 0.02 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.08 | 0.09 |
| TOTAL ORGANIC NITROGEN (N) | 0.38 | 0.41 |
| TOTAL PHOSPHORUS (P) | 0.021 | 0.022 |
| TOTAL ORTHOPHOSPHATE (P) | 0.009 | 0.006 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 113 | 112 |
| WATER TEMPERATURE (DEG C) | 21.8 | 21.8 |
| COLOR (PLATINUM-COBALT UNITS) | 0 | 0 |
| SECCHI-DISC VISIBILITY (FT) | 8 | |
| DISSOLVED OXYGEN | 9.9 | 10.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 26- 50 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1040 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 49 |
| FECAL COLIFORM, MEAN (COL./100ML) | 17 |

REMARKS

THE LAKE IS LOCATED ON THE FORT LEWIS MILITARY RESERVATION. LAND HAS BEEN EXCAVATED ON THE NORTH SIDE OF THE LAKE. EMERSED AND SUBMERSED PLANTS OCCURRED IN SCATTERED PATCHES. A LOW-DENSITY ALGAL BLOOM WAS OBSERVED.




Sequalitchew Lake, Pierce County. Bathymetric map from
U.S. Geological Survey, June 7, 1973.
Aerial photo, April 3, 1973.

SILVER LAKE PIERCE COUNTY

LATITUDE 46*52'53" LONGITUDE 122*21'55" T16N-R2E-12
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 1.83 SQ MI | RESIDENTIAL DEVELOPMENT | 30 % |
| ALTITUDE | 604. FT | | |
| LAKE AREA | 150. ACRES | NUMBER OF NEARSHORE HOMES | 33 |
| LAKE VOLUME | 1800. ACRE-FT | | |
| MEAN DEPTH | 12. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 25. FT | | |
| SHORELINE LENGTH | 1.7 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.0 | RESIDENTIAL SUBURBAN | 1 % |
| DEVELOPMENT OF VOLUME | 0.54 | AGRICULTURAL | 43 % |
| BOTTOM SLOPE | 2.1 % | FOREST OR UNPRODUCTIVE | 43 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 13 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

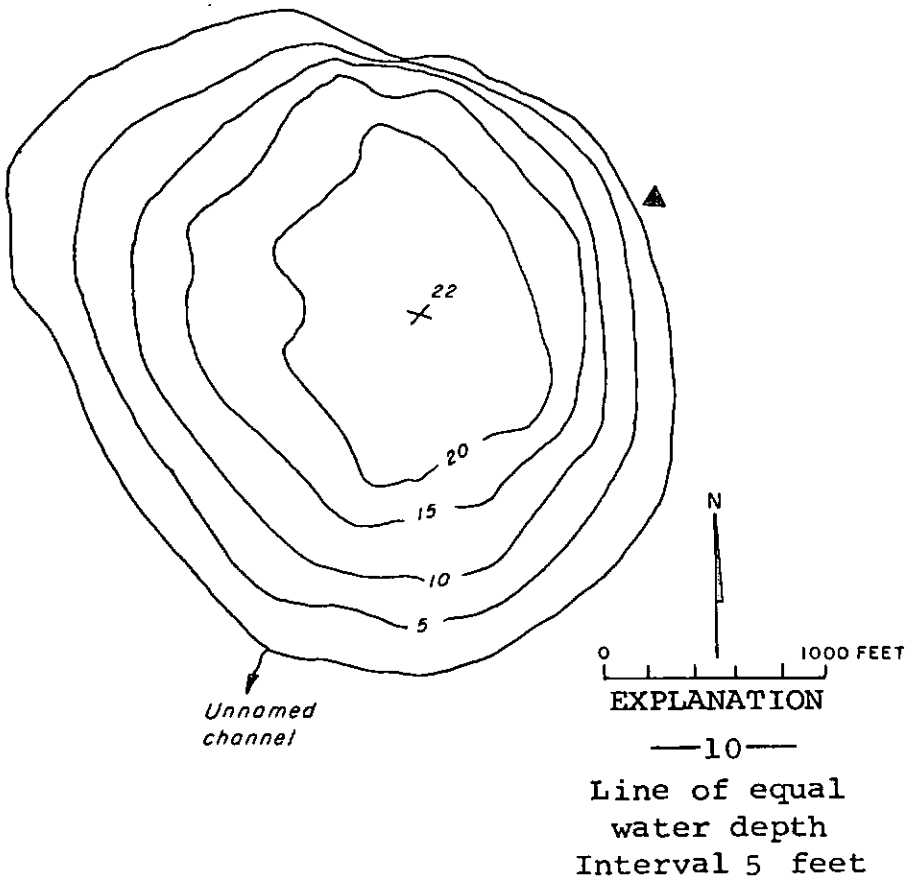
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 7/ 1/71 | |
| TIME | 1300 | 1305 |
| DEPTH (FT) | 3. | 16. |
| DISSOLVED NITRATE (N) | 0.02 | 0.01 |
| TOTAL NITRITE (N) | -- | -- |
| TOTAL AMMONIA (N) | 0.26 | 0.20 |
| TOTAL ORGANIC NITROGEN (N) | -- | -- |
| TOTAL PHOSPHORUS (P) | 0.020 | 0.030 |
| DISSOLVED ORTHOPHOSPHATE (P) | 0.010 | 0.030 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 78 | 89 |
| WATER TEMPERATURE (DEG C) | 18.5 | 13.1 |
| COLOR (PLATINUM-COBALT UNITS) | -- | -- |
| SECCHI-DISC VISIBILITY (FT) | 6 | |
| DISSOLVED OXYGEN | 9.9 | 0.3 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

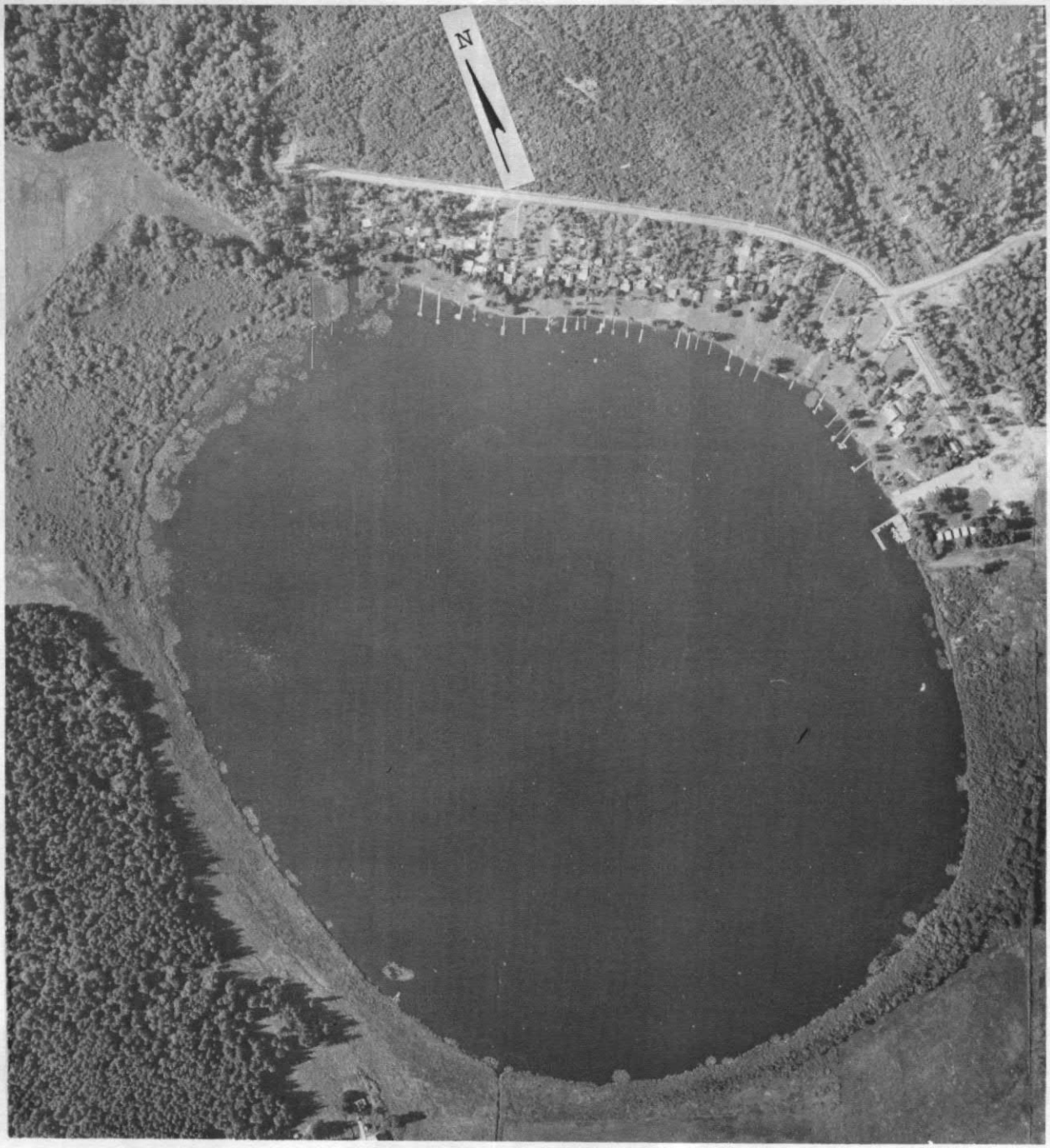
| | |
|---|---|
| DATE | 8/26/74 |
| TIME | 1115 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 3 |
| FECAL COLIFORM, MEAN (COL./100ML) | 2 |

REMARKS

EMERSED PLANTS COVERED THE SHORELINE IN BOTH SCATTERED DENSE BEDS AND IN A THIN MARGIN AROUND THE SHORE. THE MUCK LITTORAL BOTTOM SUPPORTED A HEAVY GROWTH OF SUBMERSED PLANTS (PONDWEED AND ELODEA). ABOUT 70 PERCENT OF THE SHORELINE BORDERS WETLAND OR MARSH. AN ALGAL BLOOM WAS OBSERVED. IN 1971 THE U.S. GEOLOGICAL SURVEY SAMPLED THE LAKE FOUR TIMES. THE PLANT SURVEY WAS MADE ON AUGUST 12, 1971.




Silver Lake, Pierce County. From Washington Department of Game, date unknown.




Silver Lake, Pierce County. July 14, 1971. Approx. scale 1:7000.

SPANAWAY LAKE PIERCE COUNTY

LATITUDE 47* 7'11" LONGITUDE 122*26'45" T19N-R3E-20
CHAMBERS CREEK BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 17.0 SQ MI | RESIDENTIAL DEVELOPMENT | 80 % |
| ALTITUDE | 320. FT | | |
| LAKE AREA | 280. ACRES | NUMBER OF NEARSHORE HOMES | 220 |
| LAKE VOLUME | 4600. ACRE-FT | | |
| MEAN DEPTH | 16. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 28. FT | | |
| SHORELINE LENGTH | 4.4 MI | RESIDENTIAL URBAN | 5 % |
| SHORELINE CONFIGURATION | 1.9 | RESIDENTIAL SUBURBAN | 38 % |
| DEVELOPMENT OF VOLUME | 0.57 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 0.71 % | FOREST OR UNPRODUCTIVE | 54 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 3 % |
| INFLOW | PERENNIAL | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

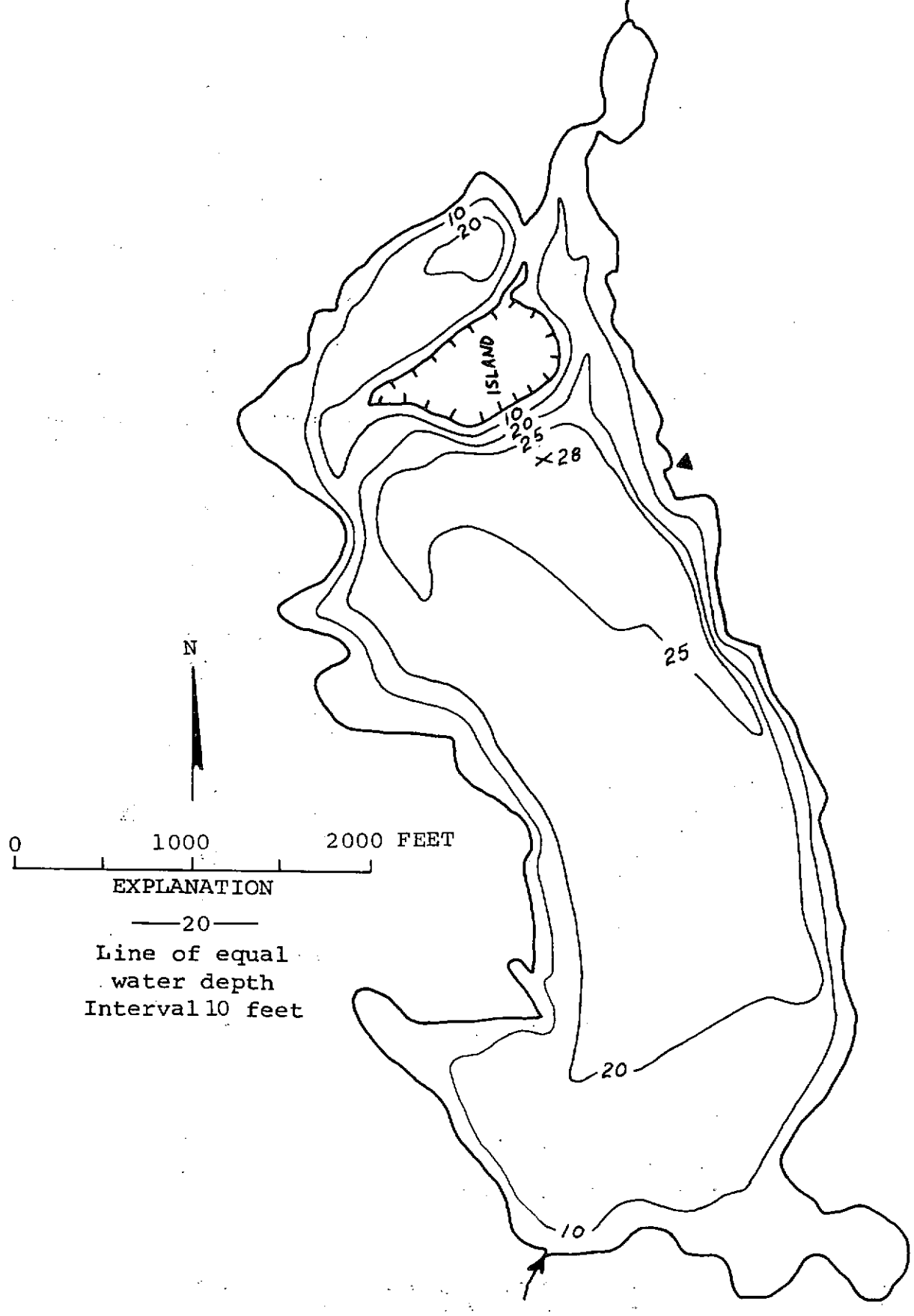
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 6/18/73 | |
| TIME | 930 | 940 |
| DEPTH (FT) | 3. | 21. |
| TOTAL NITRATE (N) | 0.04 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.01 |
| TOTAL AMMONIA (N) | 0.11 | 1.1 |
| TOTAL ORGANIC NITROGEN (N) | 0.08 | 0.00 |
| TOTAL PHOSPHORUS (P) | 0.028 | 0.25 |
| TOTAL ORTHOPHOSPHATE (P) | 0.001 | 0.070 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 93 | 116 |
| WATER TEMPERATURE (DEG C) | 16.3 | 11.0 |
| COLOR (PLATINUM-COBALT UNITS) | 5 | 50 |
| SECCHI-DISC VISIBILITY (FT) | | |
| DISSOLVED OXYGEN | 10.4 | 11.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 26- 50 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

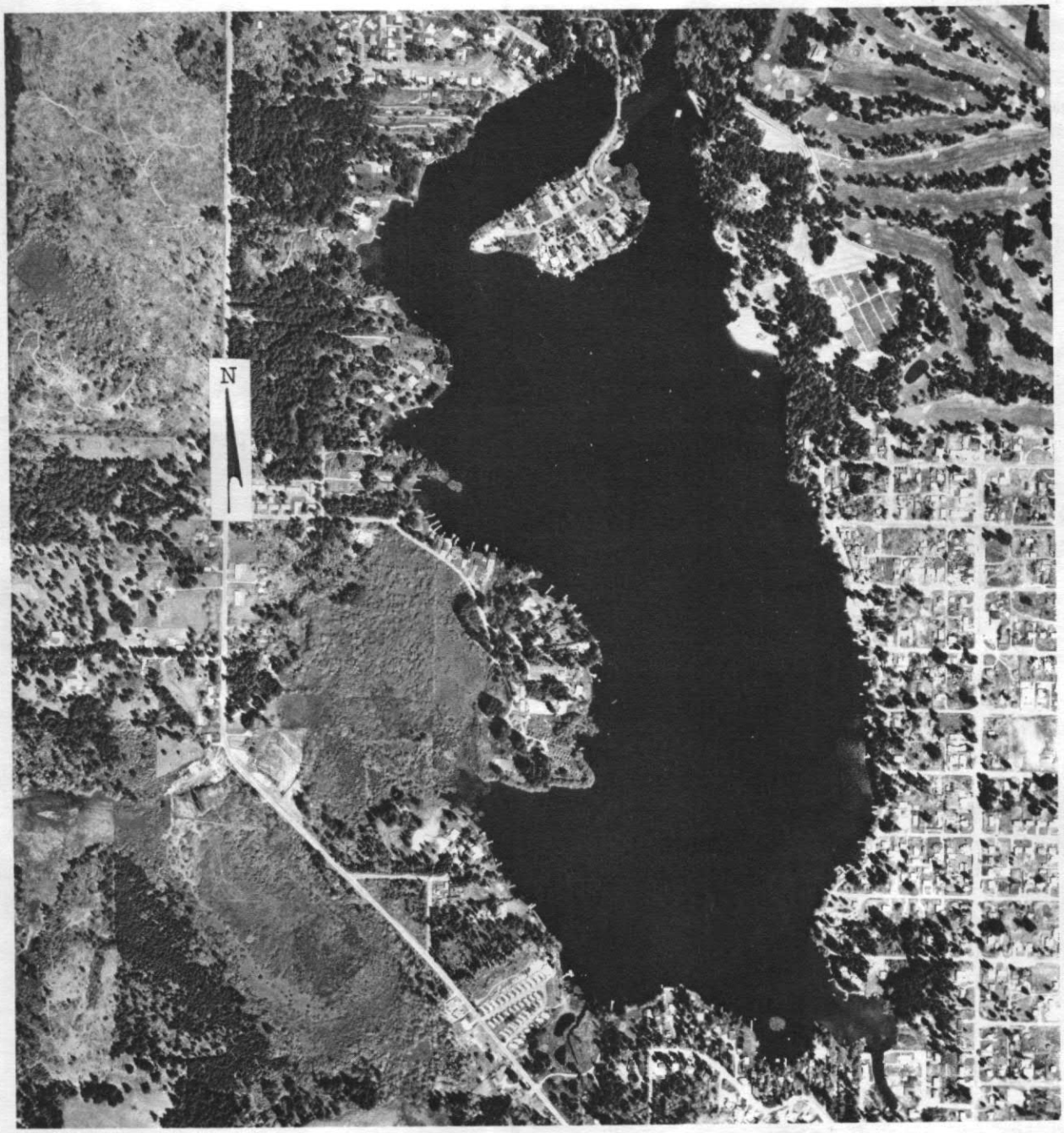
| | |
|---|---|
| DATE | 6/18/73 |
| TIME | 1000 |
| NUMBER OF FECAL COLIFORM SAMPLES | 5 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 12 |
| FECAL COLIFORM, MEAN (COL./100ML) | 4 |

REMARKS

THE LAKE IS FED BY A LARGE MARSH AND DRAINS VIA SPANAWAY CREEK AND CLOVER CREEK TO STEILACOOM LAKE. APPROXIMATELY 18 PERCENT OF THE SHORELINE IS COUNTY PARK. THE LAKE RECEIVES HEAVY RECREATIONAL USE. A LOW-DENSITY ALGAL BLOOM WAS OBSERVED. THE LITTORAL BOTTOM IS MOSTLY GRAVEL AND COBBLE. IN 1973 THE U. S. GEOLOGICAL SURVEY SAMPLED THE LAKE FOUR TIMES. THE PLANT SURVEY WAS MADE ON AUGUST 6, 1973.




Spanaway Lake, Pierce County. From Washington Department of Game, February 2, 1950.




Spanaway Lake, Pierce County. May 15, 1970. Approx. scale 1:12,000.

STANSBERRY LAKE PIERCE COUNTY

LATITUDE 47*23' 4" LONGITUDE 122*43'37" T22N-R1E-19
PUGET SOUND BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.39 SQ MI | RESIDENTIAL DEVELOPMENT | 70 % |
| ALTITUDE | 238. FT | | |
| LAKE AREA | 25. ACRES | NUMBER OF NEARSHORE HOMES | 12 |
| LAKE VOLUME | 200. ACRE-FT | | |
| MEAN DEPTH | 8. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 16. FT | | |
| SHORELINE LENGTH | 1.0 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.4 | RESIDENTIAL SUBURBAN | 1 % |
| DEVELOPMENT OF VOLUME | 0.50 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 1.4 % | FOREST OR UNPRODUCTIVE | 89 % |
| BASIN GEOLOGY | IGNEOUS | LAKE SURFACE | 10 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | ABSENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

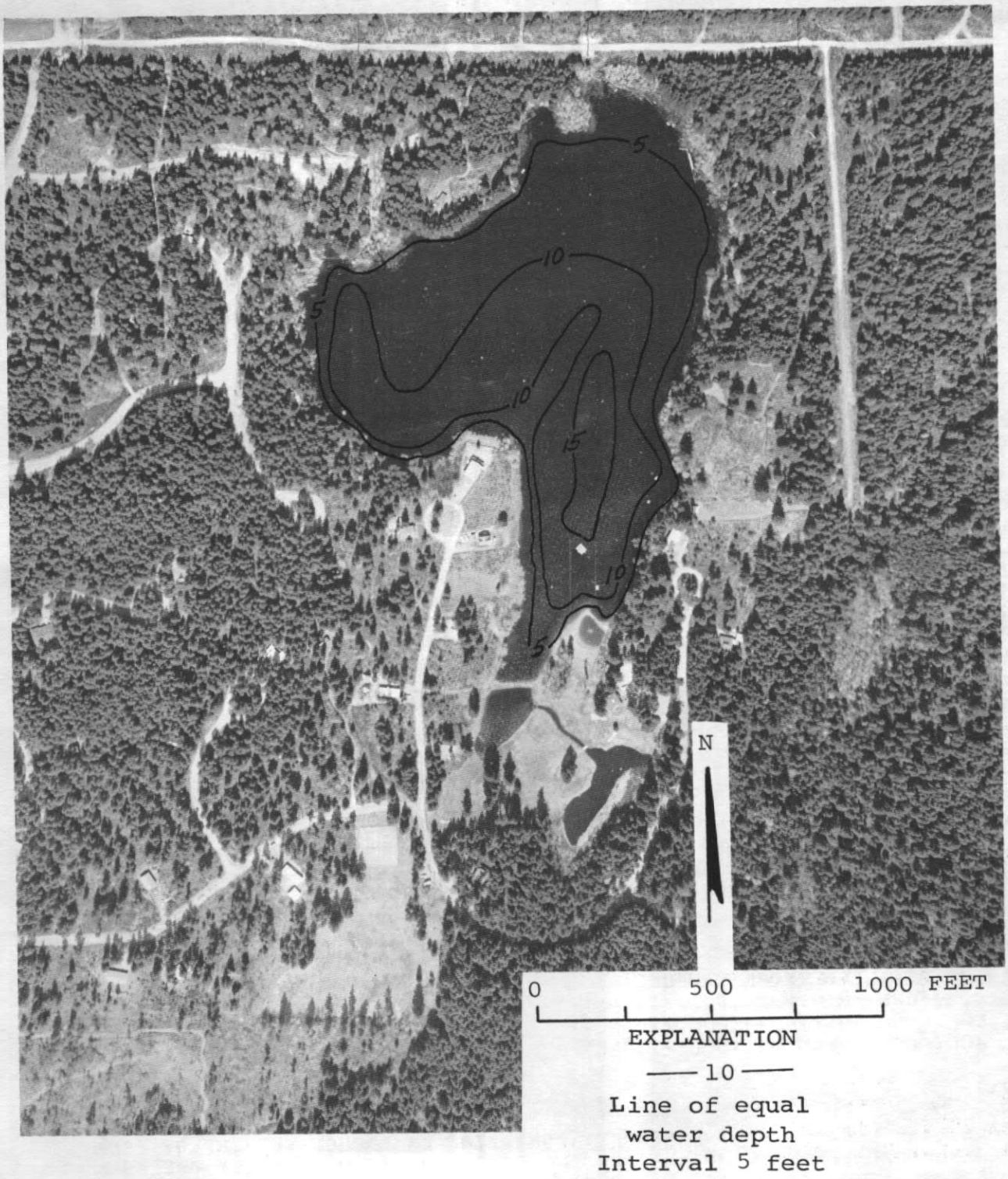
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1550 | 1555 |
| DEPTH (FT) | 3. | 10. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.06 | 0.05 |
| TOTAL ORGANIC NITROGEN (N) | 0.15 | 0.15 |
| TOTAL PHOSPHORUS (P) | 0.015 | 0.019 |
| TOTAL ORTHOPHOSPHATE (P) | 0.005 | 0.005 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 27 | 27 |
| WATER TEMPERATURE (DEG C) | 22.8 | 21.3 |
| COLOR (PLATINUM-COBALT UNITS) | 10 | 10 |
| SECCHI-DISC VISIBILITY (FT) | 10 | |
| DISSOLVED OXYGEN | 8.4 | 8.6 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 1- 10 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1600 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MEAN (COL./100ML) | <1 |

REMARKS

A RESIDENTIAL AND RECREATIONAL DEVELOPMENT ENCOMPASS THE LAKE AND NEARSHORE ENVIRONS.




Stansberry Lake, Pierce County. Bathymetric map from U.S. Geological Survey, June 22, 1973. Aerial photo, April 3, 1973.

STEILACOOM LAKE PIERCE COUNTY

LATITUDE 47°10'40" LONGITUDE 122°32' 4" T20N-R2E-34
CHAMBERS CREEK BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 89.4 SQ MI | RESIDENTIAL DEVELOPMENT | 100 % |
| ALTITUDE | 210. FT | | |
| LAKE AREA | 320. ACRES | NUMBER OF NEARSHORE HOMES | 285 |
| LAKE VOLUME | 3500. ACRE-FT | | |
| MEAN DEPTH | 11. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 20. FT | | |
| SHORELINE LENGTH | 5.7 MI | RESIDENTIAL URBAN | 28 % |
| SHORELINE CONFIGURATION | 2.3 | RESIDENTIAL SUBURBAN | 27 % |
| DEVELOPMENT OF VOLUME | 0.56 | AGRICULTURAL | 2 % |
| BOTTOM SLOPE | 2.8 % | FOREST OR UNPRODUCTIVE | 42 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 1 % |
| INFLOW | PERENNIAL | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

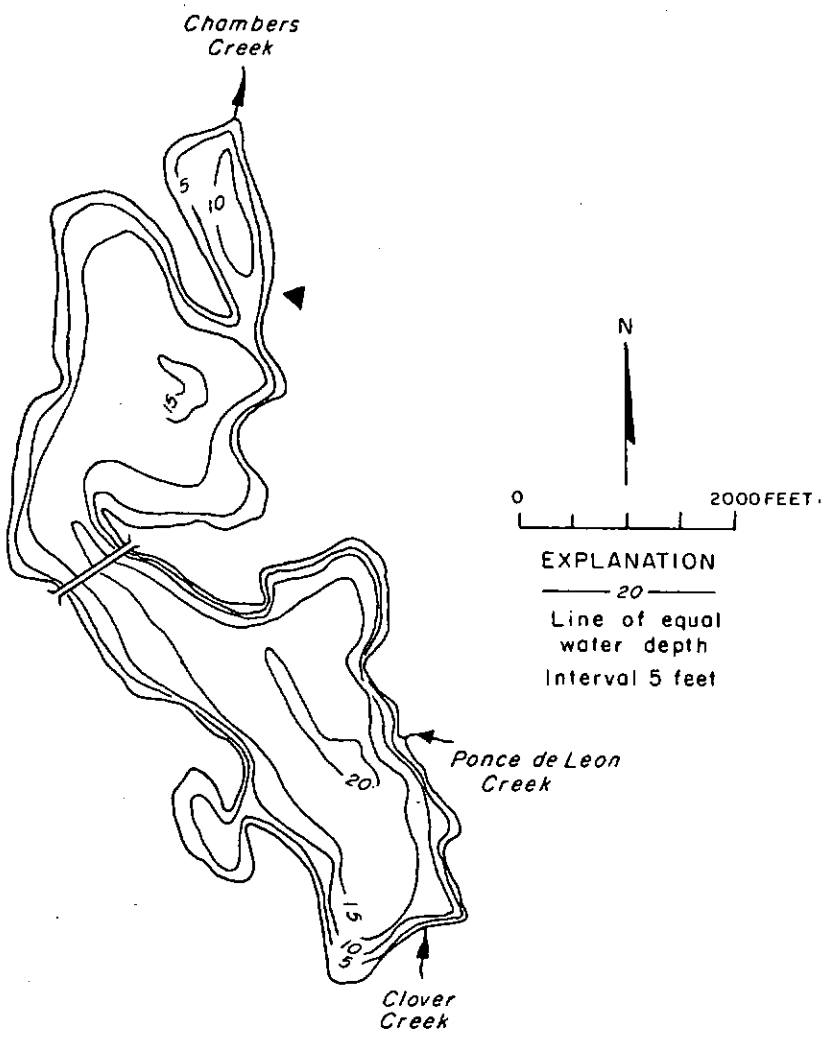
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 7/23/71 | |
| TIME | 1030 | 1035 |
| DEPTH (FT) | 3. | 16. |
| DISSOLVED NITRATE (N) | 0.62 | 0.87 |
| TOTAL NITRITE (N) | -- | -- |
| TOTAL AMMONIA (N) | 0.05 | 0.12 |
| TOTAL ORGANIC NITROGEN (N) | -- | -- |
| TOTAL PHOSPHORUS (P) | 0.020 | 0.030 |
| DISSOLVED ORTHOPHOSPHATE (P) | 0.010 | 0.010 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 108 | 132 |
| WATER TEMPERATURE (DEG C) | 23.0 | 13.0 |
| COLOR (PLATINUM-COBALT UNITS) | -- | -- |
| SECCHI-DISC VISIBILITY (FT) | 10 | |
| DISSOLVED OXYGEN | 10.1 | 10.2 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 1- 10 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | NONE OR <1 % |

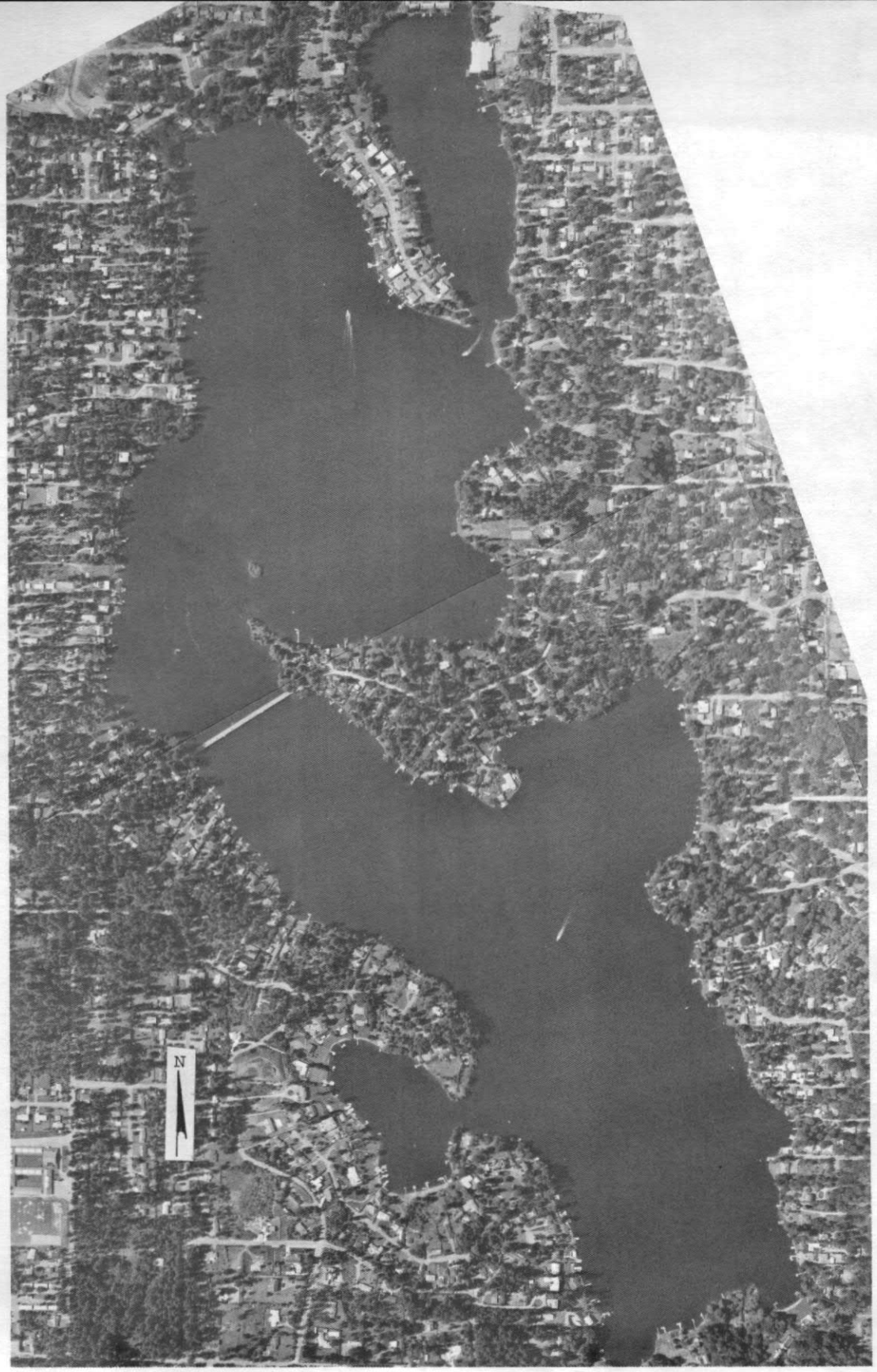
| | |
|---|---|
| DATE | 8/21/74 |
| TIME | 1400 |
| NUMBER OF FECAL COLIFORM SAMPLES | 4 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 33 |
| FECAL COLIFORM, MEAN (COL./100ML) | 14 |

REMARKS

AN URBAN LAKE LOCATED SOUTHEAST OF TACOMA. THE LAKE RECEIVES INFLOW FROM PONCE DE LEON CREEK (PERENNIAL) AND CLOVER CREEK. BOTH OF THESE CREEKS DRAIN A POPULATED URBAN AREA WHICH IS WITHOUT SEWERS. THE DEPARTMENT OF ECOLOGY HAS MADE STUDIES CONCERNING THE UNDERGROUND DISPOSAL OF SEWAGE IN THE STEILACOOM LAKE DRAINAGE BASIN. THE LITTORAL BOTTOM OF GRAVEL WITH LOCAL AREAS OF SILT AND MUCK SUPPORTED A SPARSE GROWTH OF AQUATIC MACROPHYTES. HOWEVER, THE LAKE HAS BEEN TREATED WITH ALGACIDES AND HERBICIDES TO CONTROL AQUATIC PLANT GROWTH. THE LAKE HAS A LARGE WATERFOWL POPULATION. IN 1971 THE U.S. GEOLOGICAL SURVEY SAMPLED THE LAKE FOUR TIMES. THE PLANT SURVEY WAS MADE ON AUGUST 10, 1971.




Steilacoom Lake, Pierce County. From Washington Department of Game, June 2, 1950.




Steilacoom Lake, Pierce County. July 14, 1971. Approx. scale 1:11,000.

STIDHAM LAKE PIERCE COUNTY

LATITUDE 46°57' 8" LONGITUDE 122°16'36" T17N-R4E-22
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.12 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 655. FT | | |
| LAKE AREA | 10. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 120. ACRE-FT | | |
| MEAN DEPTH | 12. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 22. FT | | |
| SHORELINE LENGTH | 0.50 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.56 | AGRICULTURAL | 19 % |
| BOTTOM SLOPE | 3.0 % | FOREST OR UNPRODUCTIVE | 68 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 13 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

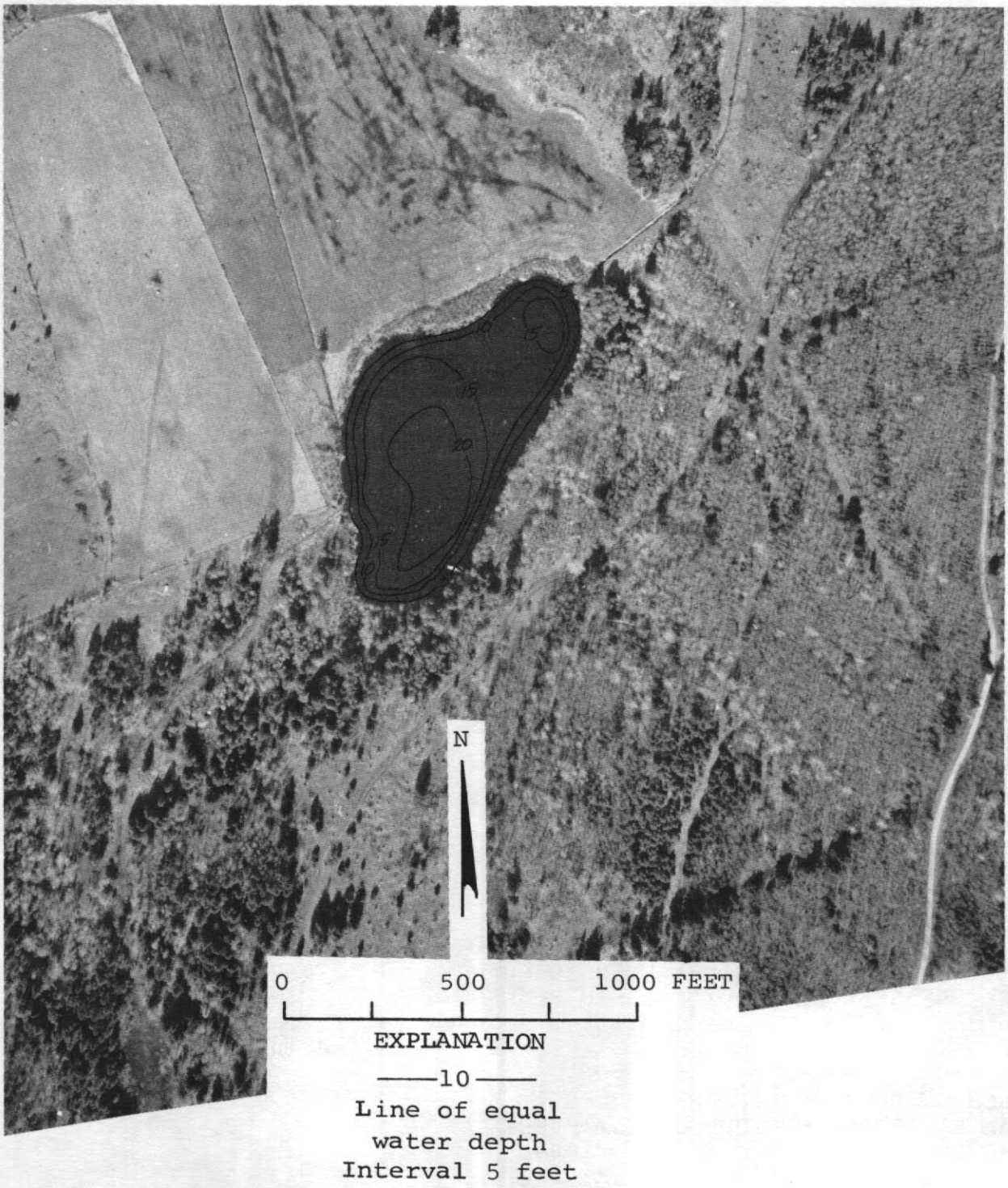
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1540 | 1545 |
| DEPTH (FT) | 3. | 16. |
| TOTAL NITRATE (N) | 0.00 | 0.00 |
| TOTAL NITRITE (N) | 0.01 | 0.01 |
| TOTAL AMMONIA (N) | 0.23 | 1.4 |
| TOTAL ORGANIC NITROGEN (N) | 0.87 | 0.60 |
| TOTAL PHOSPHORUS (P) | 0.054 | 0.19 |
| TOTAL ORTHOPHOSPHATE (P) | 0.017 | 0.15 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 51 | 62 |
| WATER TEMPERATURE (DEG C) | 20.0 | 6.0 |
| COLOR (PLATINUM-COBALT UNITS) | 125 | 125 |
| SECCHI-DISC VISIBILITY (FT) | 2 | |
| DISSOLVED OXYGEN | 6.1 | 0.2 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1550 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 2 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 8 |
| FECAL COLIFORM, MEAN (COL./100ML) | 5 |

REMARKS

EMERSED PLANTS COVERED THE MARSHY SHORELINE. THE WATER IS A DARK BROWN COLOR. THE LITTORAL BOTTOM IS MOSTLY MUCK. HYDROGEN SULFIDE WAS DETECTED IN THE HYPOLIMNION.




Stidham Lake, Pierce County. Bathymetric map from U.S. Geological Survey, June 20, 1973. Aerial photo, April 3, 1973.

SUMMIT LAKE PIERCE COUNTY

LATITUDE 47* 2'15" LONGITUDE 121*49'50" T18N-R8E-19
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.10 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 5440. FT | | |
| LAKE AREA | 20. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 1500. ACRE-FT | | |
| MEAN DEPTH | 76. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 190. FT | | |
| SHORELINE LENGTH | 0.69 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.40 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 18. % | FOREST OR UNPRODUCTIVE | 69 % |
| BASIN GEOLOGY | IGNEOUS | LAKE SURFACE | 31 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | ABSENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

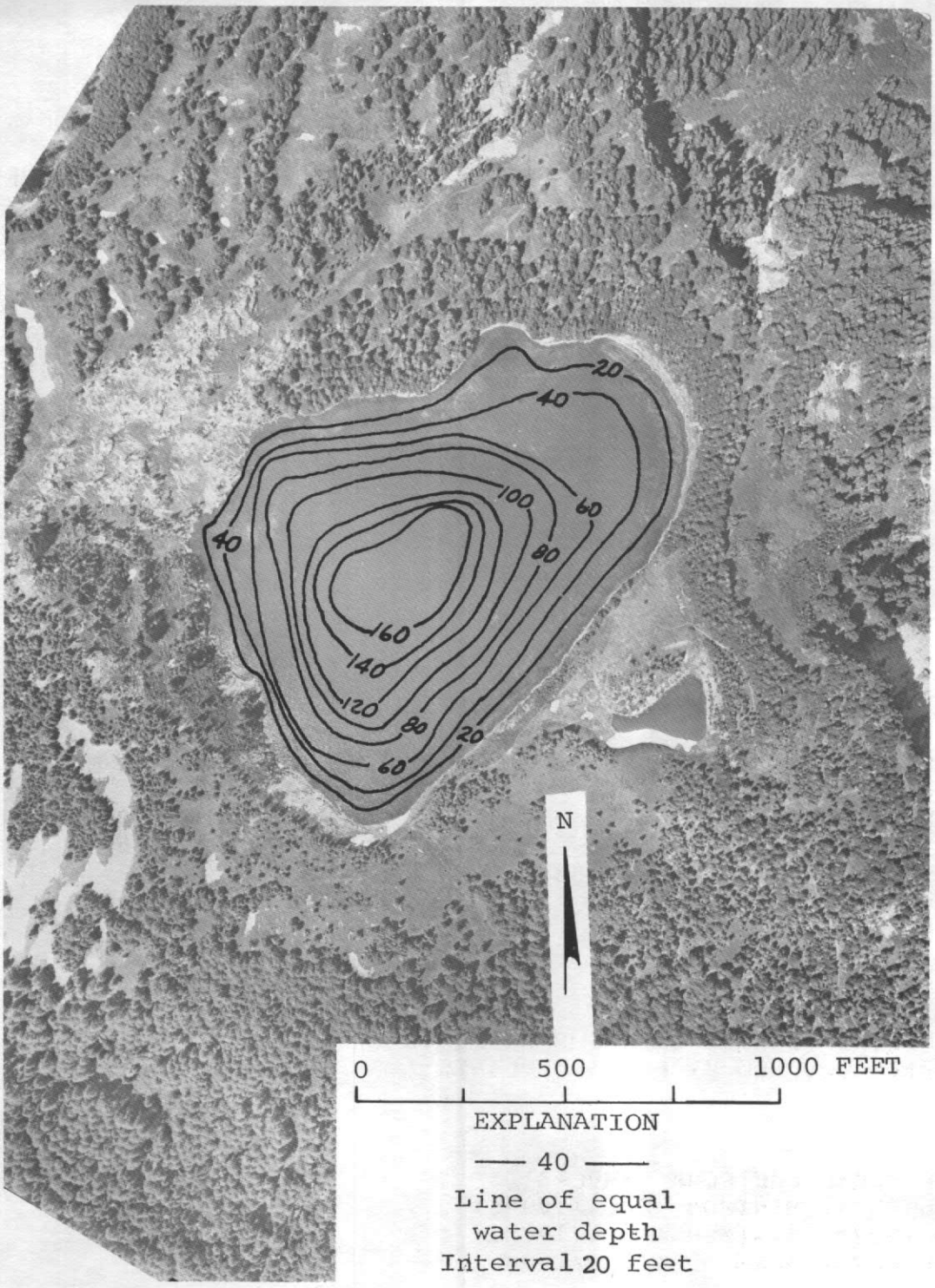
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 7/17/73 | |
| TIME | 1530 | 1540 |
| DEPTH (FT) | 3. | 151. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.02 | 0.02 |
| TOTAL ORGANIC NITROGEN (N) | 0.00 | 0.01 |
| TOTAL PHOSPHORUS (P) | 0.006 | 0.009 |
| TOTAL ORTHOPHOSPHATE (P) | 0.001 | 0.001 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 4 | 4 |
| WATER TEMPERATURE (DEG C) | 13.7 | 4.3 |
| COLOR (PLATINUM-COBALT UNITS) | 0 | 0 |
| SECCHI-DISC VISIBILITY (FT) | 79 | |
| DISSOLVED OXYGEN | 8.4 | 9.1 |

LAKE SHORELINE COVERED BY EMERSED PLANTS LITTLE OR NONE
LAKE SURFACE COVERED BY EMERSED PLANTS NONE OR <1 %

| DATE | 7/17/73 |
|---|---|
| TIME | 1540 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MEAN (COL./100ML) | <1 |

REMARKS

THE WATER WAS EXTREMELY TRANSPARENT AS INDICATED BY A SECCHI-DISC READING OF 80 FEET. THE WATER COLOR WAS A BRIGHT BLUE. THE LAKE APPEARS TO BE AN OLD CRATER.




Summit Lake, Pierce County. Bathymetric map from U.S. Geological Survey, September 1, 1973. Aerial photo, July 14, 1973.

SURPRISE (18N-7E-25) LAKE PIERCE COUNTY

LATITUDE 47° 1'21" LONGITUDE 121°51'35" T18N-R7E-25
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.30 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 4450. FT | | |
| LAKE AREA | 7. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 41. ACRE-FT | | |
| MEAN DEPTH | 6. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 14. FT | | |
| SHORELINE LENGTH | 0.44 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.2 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.42 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 2.3 % | FOREST OR UNPRODUCTIVE | 96 % |
| BASIN GEOLOGY | IGNEOUS | LAKE SURFACE | 4 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

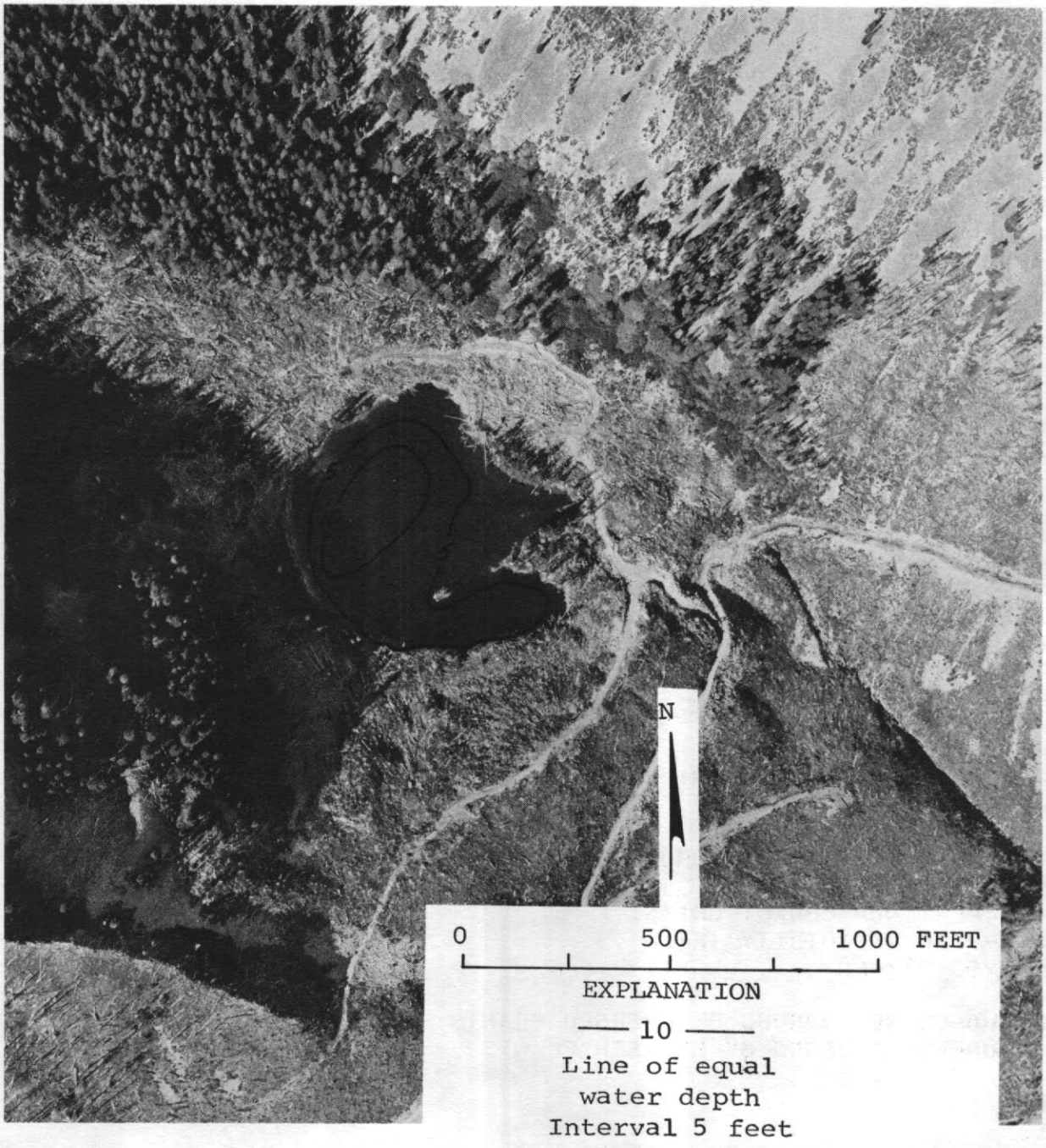
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/11/73 | |
| TIME | 1915 | 1920 |
| DEPTH (FT) | 3. | 6. |
| TOTAL NITRATE (N) | 0.01 | -- |
| TOTAL NITRITE (N) | 0.00 | -- |
| TOTAL AMMONIA (N) | 0.04 | -- |
| TOTAL ORGANIC NITROGEN (N) | 0.07 | -- |
| TOTAL PHOSPHORUS (P) | 0.004 | -- |
| TOTAL ORTHOPHOSPHATE (P) | 0.003 | -- |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 11 | -- |
| WATER TEMPERATURE (DEG C) | 19.7 | 18.0 |
| COLOR (PLATINUM-COBALT UNITS) | 15 | -- |
| SECCHI-DISC VISIBILITY (FT) | > 7 | |
| DISSOLVED OXYGEN | 8.0 | 8.0 |

LAKE SHORELINE COVERED BY EMERSED PLANTS LITTLE OR NONE
LAKE SURFACE COVERED BY EMERSED PLANTS NONE OR <1 %

| DATE | 8/11/73 |
|---|---|
| TIME | 1925 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MEAN (COL./100ML) | <1 |

REMARKS

A VERY SHALLOW HIGH-ALTITUDE LAKE. THE SHORE ENVIRONS AND MUCH OF THE SURROUNDING HILLS HAVE BEEN LOGGED. FLOATING AND SUBMERGED LOGS COVERED THE SHORELINE LOCALLY.




Surprise (18N-7E-25) Lake, Pierce County. Bathymetric map from U.S. Geological Survey, September 2, 1973.
Aerial photo, September 27, 1973.

SURPRISE (20N-4E-4) LAKE PIERCE COUNTY

LATITUDE 47°14'40" LONGITUDE 122°18' 9" T20N-R4E-4
PUGET SOUND BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.70 SQ MI | RESIDENTIAL DEVELOPMENT | 50 % |
| ALTITUDE | 315. FT | | |
| LAKE AREA | 32. ACRES | NUMBER OF NEARSHORE HOMES | 42 |
| LAKE VOLUME | 510. ACRE-FT | | |
| MEAN DEPTH | 16. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 40. FT | | |
| SHORELINE LENGTH | 0.95 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.2 | RESIDENTIAL SUBURBAN | 15 % |
| DEVELOPMENT OF VOLUME | 0.40 | AGRICULTURAL | 62 % |
| BOTTOM SLOPE | 3.0 % | FOREST OR UNPRODUCTIVE | 16 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 7 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

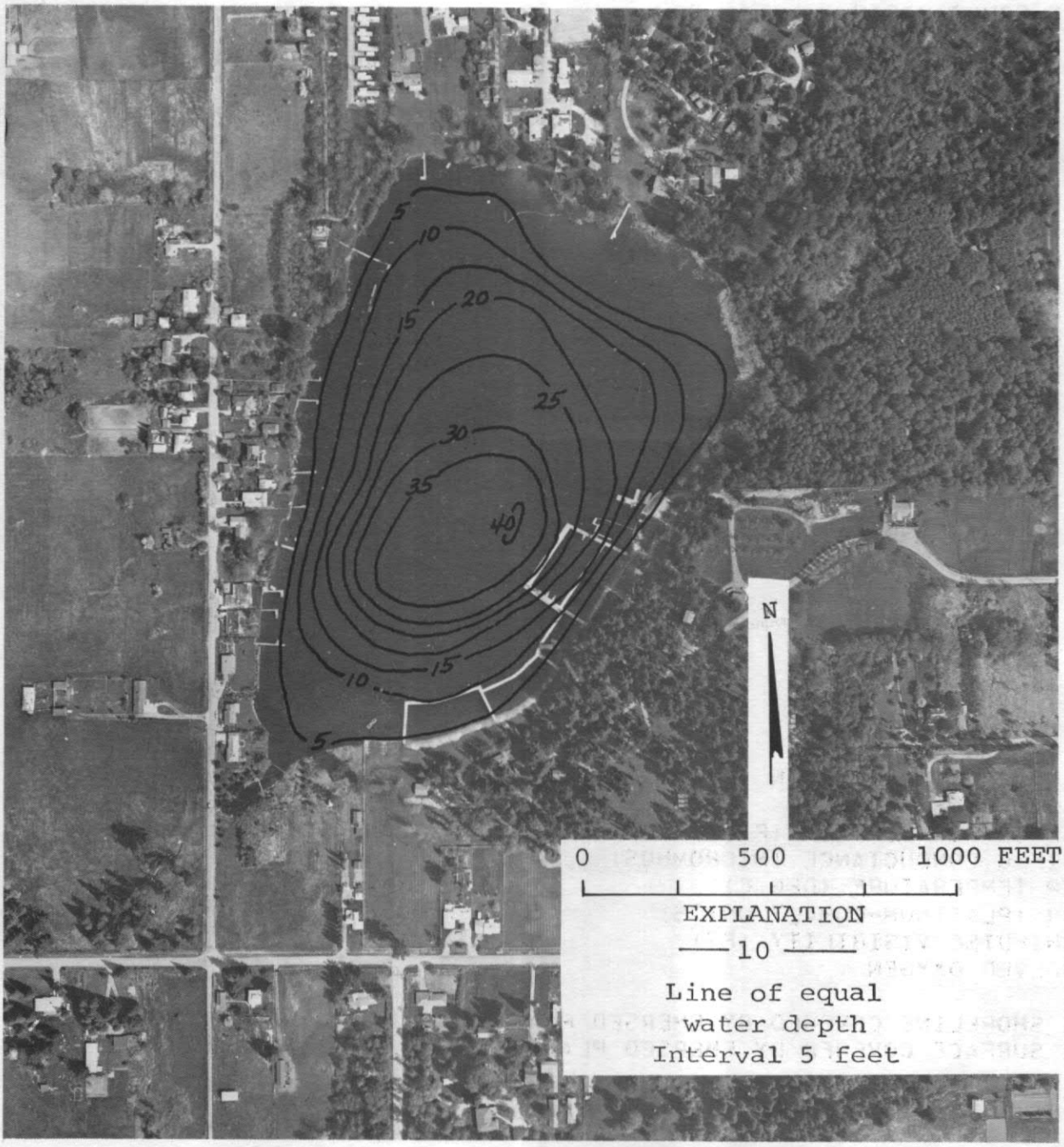
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/ 8/73 | |
| TIME | 1730 | 1735 |
| DEPTH (FT) | 3. | 30. |
| TOTAL NITRATE (N) | 0.01 | 0.02 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.10 | 0.58 |
| TOTAL ORGANIC NITROGEN (N) | 0.35 | 0.28 |
| TOTAL PHOSPHORUS (P) | 0.011 | 0.057 |
| TOTAL ORTHOPHOSPHATE (P) | 0.003 | 0.028 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 96 | 101 |
| WATER TEMPERATURE (DEG C) | 21.9 | 8.0 |
| COLOR (PLATINUM-COBALT UNITS) | 20 | 77 |
| SECCHI-DISC VISIBILITY (FT) | 19 | |
| DISSOLVED OXYGEN | 8.3 | 0.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 26- 50 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/ 8/73 |
| TIME | 1745 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 5 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 30 |
| FECAL COLIFORM, MEAN (COL./100ML) | 16 |

REMARKS

THE LAKE IS LOCATED SOUTHEAST OF TACOMA AND RECEIVES HEAVY RECREATIONAL USE. EMERSED PLANTS WERE SCATTERED IN PATCHES.




Surprise (20N-4E-4) Lake, Pierce County. Bathymetric map from U.S. Geological Survey, June 15, 1973. Aerial photo, April 29, 1973.

TANWAX LAKE PIERCE COUNTY

LATITUDE 46°56'40" LONGITUDE 122°16'26" T17N-R4E-23
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 4.08 SQ MI | RESIDENTIAL DEVELOPMENT | 70 % |
| ALTITUDE | 600. FT | | |
| LAKE AREA | 170. ACRES | NUMBER OF NEARSHORE HOMES | 70 |
| LAKE VOLUME | 3300. ACRE-FT | | |
| MEAN DEPTH | 20. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 30. FT | | |
| SHORELINE LENGTH | 2.8 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.5 | RESIDENTIAL SUBURBAN | 6 % |
| DEVELOPMENT OF VOLUME | 0.65 | AGRICULTURAL | 24 % |
| BOTTOM SLOPE | 5.1 % | FOREST OR UNPRODUCTIVE | 62 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 8 % |
| INFLOW | PERENNIAL | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

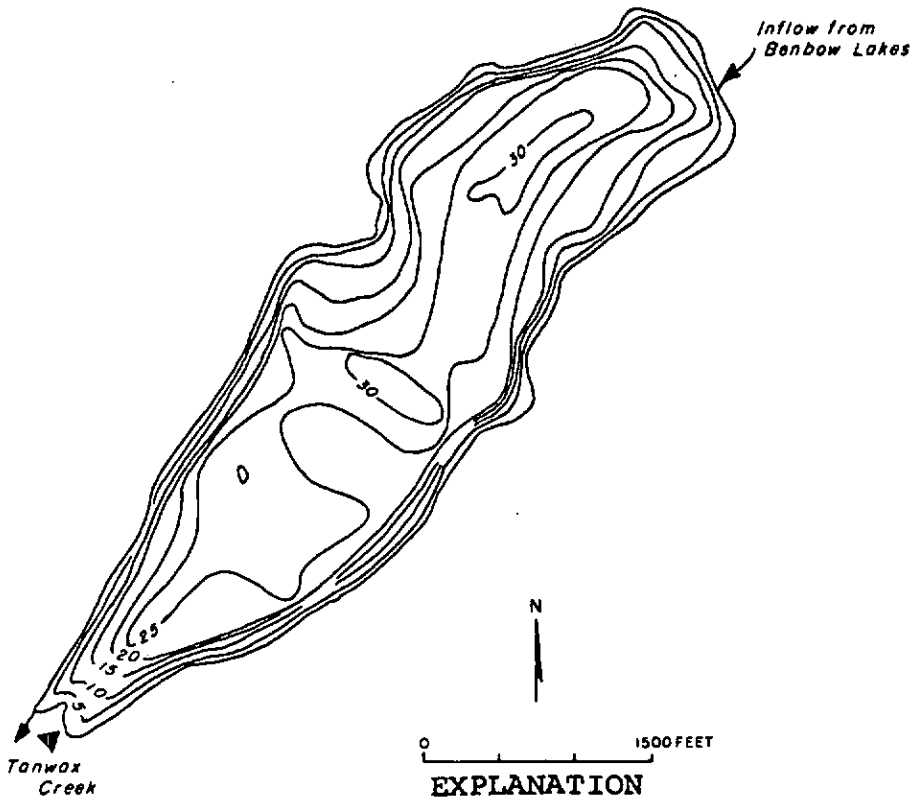
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 7/ 6/71 | |
| TIME | 1100 | 1120 |
| DEPTH (FT) | 3. | 20. |
| DISSOLVED NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | -- | -- |
| TOTAL AMMONIA (N) | 0.09 | 0.27 |
| TOTAL ORGANIC NITROGEN (N) | -- | -- |
| TOTAL PHOSPHORUS (P) | 0.020 | 0.050 |
| DISSOLVED ORTHOPHOSPHATE (P) | 0.010 | 0.030 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 63 | 92 |
| WATER TEMPERATURE (DEG C) | 18.0 | 11.0 |
| COLOR (PLATINUM-COBALT UNITS) | -- | -- |
| SECCHI-DISC VISIBILITY (FT) | 7 | |
| DISSOLVED OXYGEN | 9.7 | 0.3 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/26/74 |
| TIME | 1220 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 5 |
| FECAL COLIFORM, MEAN (COL./100ML) | 4 |

REMARKS

THE LAKE IS FED BY THE BENBOW LAKES AND STIDHAM LAKE. THE LAKE IS PART OF A SOUTHWEST-TRENDING KETTLE CHAIN FORMED ALONG PREGLACIAL DRAINAGE LINES. MOST OF THE EMERSED AND SUBMERSED ROOTED AQUATIC PLANTS WERE NEAR THE OUTLET AND INLET. THE NARROW CHANNEL NEAR THE OUTLET WAS CHOKED WITH AQUATIC MACROPHYTES. IN 1971 THE U.S. GEOLOGICAL SURVEY SAMPLED THE LAKE FOUR TIMES. THE PLANT SURVEY WAS MADE ON SEPTEMBER 10, 1971. WATER-LEVEL OBSERVATIONS HAVE BEEN MADE BY THE U.S. GEOLOGICAL SURVEY SINCE 1962.




Tanwax Lake, Pierce County. From Washington Department of Game, June 26, 1952.


Tanwax Lake, Pierce County. July 14, 1971. Approx. scale 1:8100.

TAPPS LAKE PIERCE COUNTY

LATITUDE 47°14'18" LONGITUDE 122°12'11" T20N-R5E-8
PUYALLUP RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | -- SQ MI | RESIDENTIAL DEVELOPMENT | 43 % |
| ALTITUDE | 543. FT | | |
| LAKE AREA | 2700. ACRES | NUMBER OF NEARSHORE HOMES | 535 |
| LAKE VOLUME | 67000. ACRE-FT | | |
| MEAN DEPTH | 25. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 90. FT | | |
| SHORELINE LENGTH | 42. MI | NOT DETERMINED | |
| SHORELINE CONFIGURATION | 5.7 | | |
| DEVELOPMENT OF VOLUME | 0.28 | | |
| BOTTOM SLOPE | 0.73 % | | |
| BASIN GEOLOGY | SED./META. | | |
| INFLOW | PERENNIAL | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

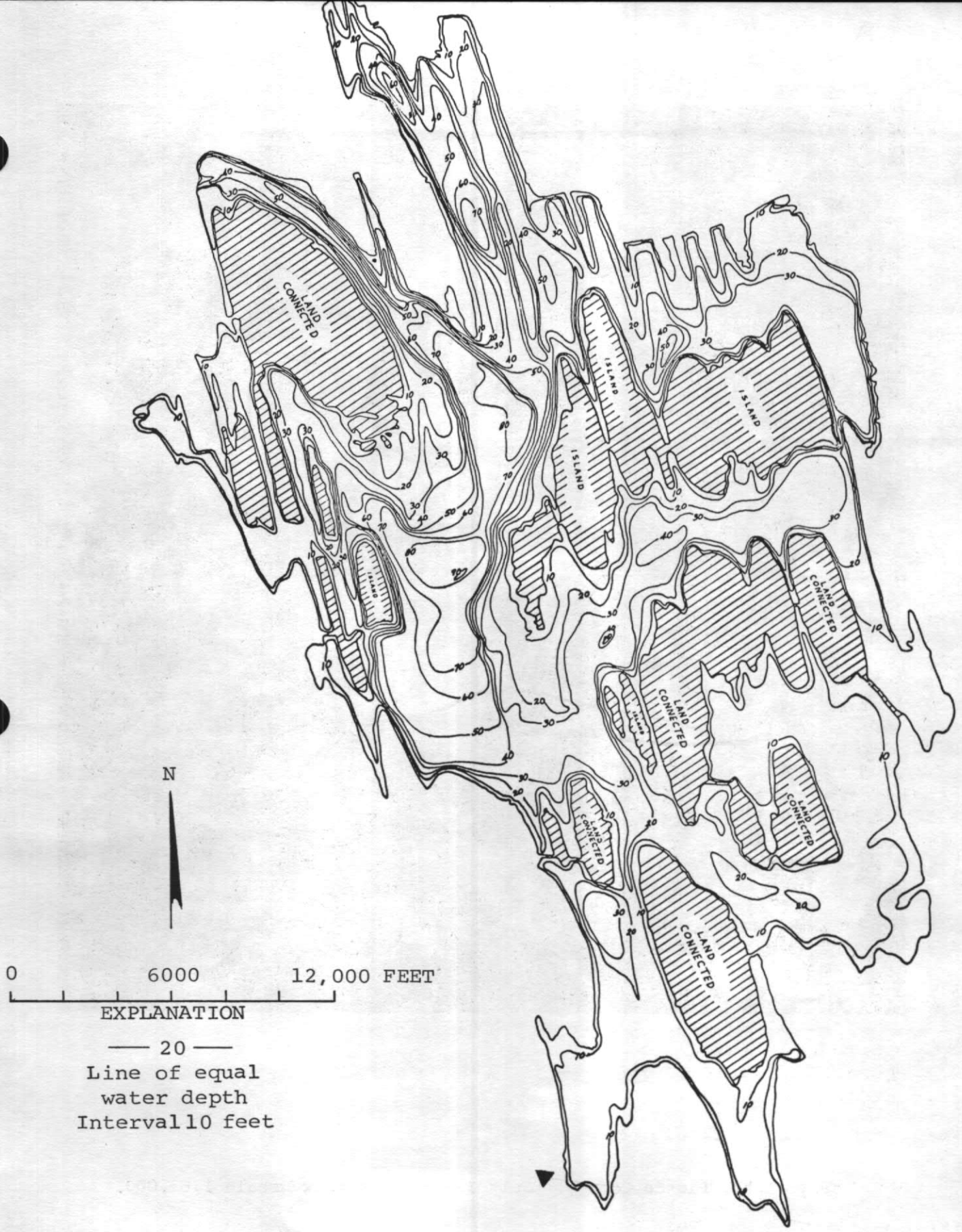
| SAMPLE SITE | 1 | | 2 | |
|---|---|---|---|---|
| DATE | 9/ 4/74 | | 9/ 4/74 | |
| TIME | 1245 | 1250 | 1345 | 1350 |
| DEPTH (FT) | 3. | 46. | 3. | 16. |
| TOTAL NITRATE (N) | 0.00 | 0.04 | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.01 | 0.01 | 0.01 |
| TOTAL AMMONIA (N) | 0.06 | 0.12 | 0.06 | 0.10 |
| TOTAL ORGANIC NITROGEN (N) | 0.10 | -- | 0.09 | 0.02 |
| TOTAL PHOSPHORUS (P) | 0.015 | 0.033 | 0.012 | 0.026 |
| TOTAL ORTHOPHOSPHATE (P) | 0.013 | 0.029 | 0.010 | 0.026 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 45 | 48 | 45 | 50 |
| WATER TEMPERATURE (DEG C) | 19.3 | 9.4 | 19.7 | 15.2 |
| COLOR (PLATINUM-COBALT UNITS) | 10 | 15 | -- | -- |
| SECCHI-DISC VISIBILITY (FT) | 4 | | 4 | |
| DISSOLVED OXYGEN | 9.5 | 7.9 | 9.1 | 9.4 |

LAKE SHORELINE COVERED BY EMERSED PLANTS LITTLE OR NONE
LAKE SURFACE COVERED BY EMERSED PLANTS NONE OR <1 %

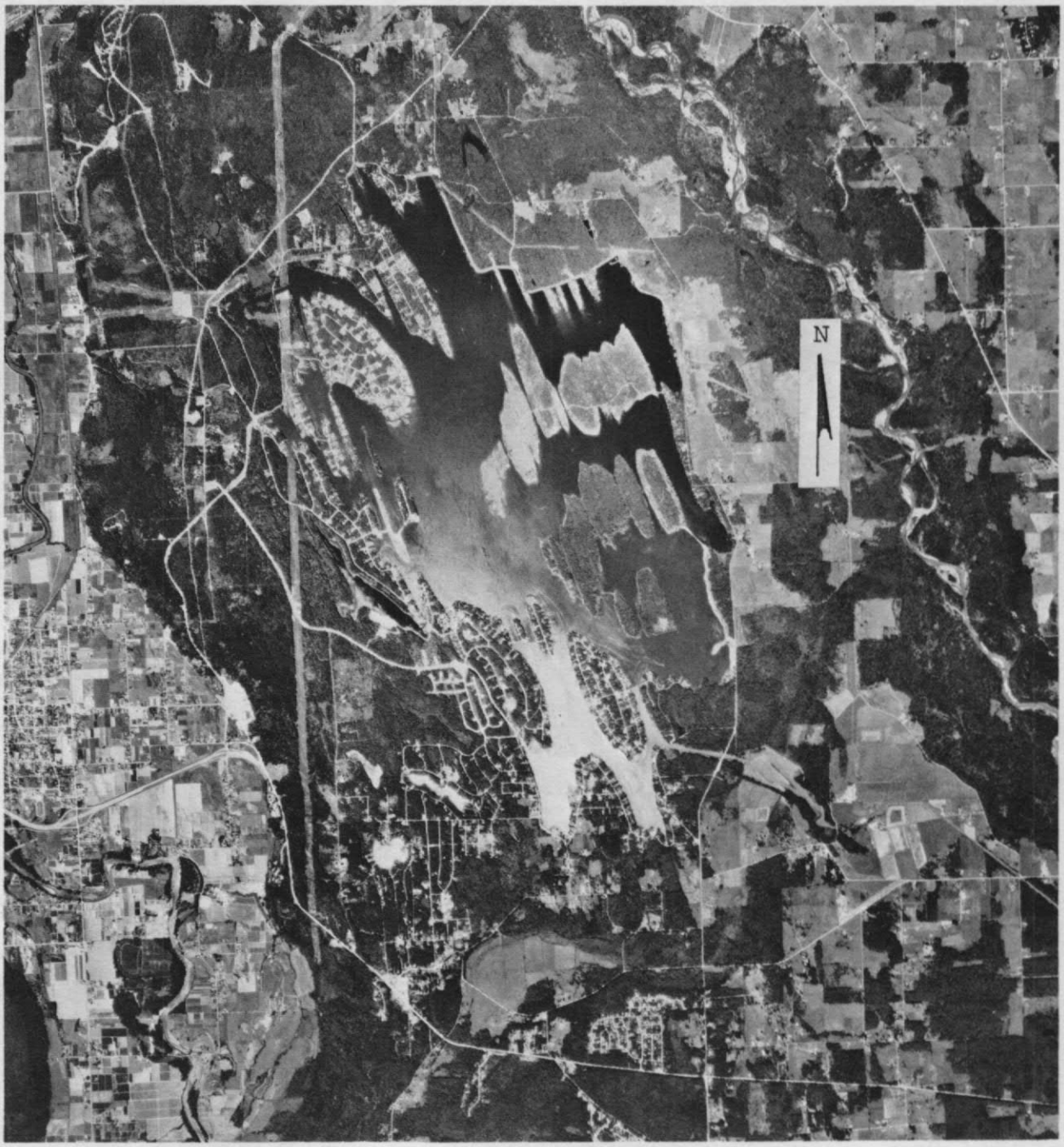
| | |
|---|---|
| DATE | 9/ 4/74 |
| TIME | 1515 |
| NUMBER OF FECAL COLIFORM SAMPLES | 5 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 14 |
| FECAL COLIFORM, MEAN (COL./100ML) | 8 |

REMARKS

THE LAKE WAS FORMED BY THE DIKING AND INUNDATION OF SEVERAL SMALL LAKES, INTO WHICH PART OF THE FLOW OF THE WHITE RIVER IS DIVERTED. THE LAKE IS USED FOR HYDROPOWER. THE LAKE HAS NUMEROUS ISLANDS AND PENINSULAS. THE WATER WAS TURBID FROM THE GLACIAL SILT OF THE WHITE RIVER INFLOW. THE DO WAS NEAR SATURATION THROUGHOUT THE WATER COLUMN. FLOATING AND SUBMERGED LOGS WERE OBSERVED LOCALLY.




Tapps Lake, Pierce County. From
U.S. Geological Survey, May 31, 1974.




Tapps Lake, Pierce County. July 3, 1972. Approx. scale 1:63,000.

TULE LAKE PIERCE COUNTY

LATITUDE 46*52'48" LONGITUDE 122*26' 0" T16N-R3E-9
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 4.34 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 456. FT | | |
| LAKE AREA | 30. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 160. ACRE-FT | | |
| MEAN DEPTH | 5. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 10. FT | | |
| SHORELINE LENGTH | 1.2 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.6 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.53 | AGRICULTURAL | 15 % |
| BOTTOM SLOPE | 0.78 % | FOREST OR UNPRODUCTIVE | 84 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 1 % |
| INFLOW | INTERMITTENT | | |
| OUTFLOW CHANNEL | ABSENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

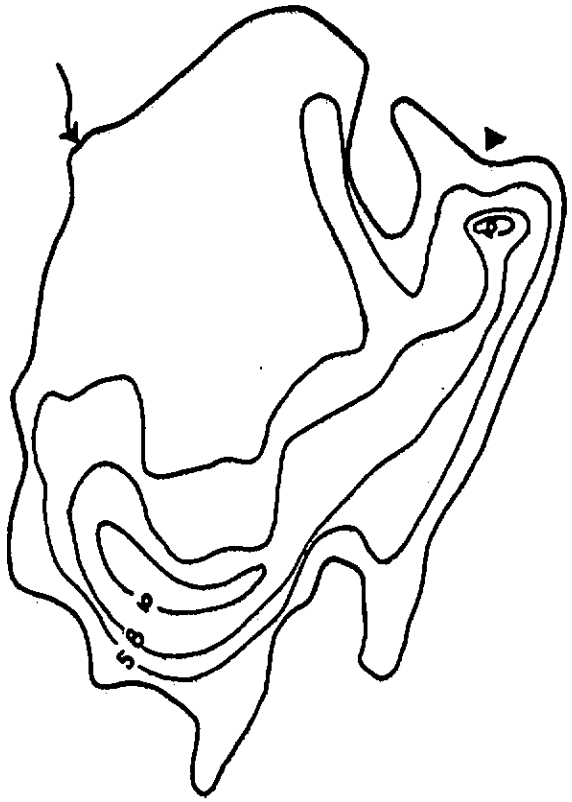
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/11/73 | |
| TIME | 1515 | 1520 |
| DEPTH (FT) | 3. | 6. |
| TOTAL NITRATE (N) | 0.00 | -- |
| TOTAL NITRITE (N) | 0.01 | -- |
| TOTAL AMMONIA (N) | 0.16 | -- |
| TOTAL ORGANIC NITROGEN (N) | 0.53 | -- |
| TOTAL PHOSPHORUS (P) | 0.057 | -- |
| TOTAL ORTHOPHOSPHATE (P) | 0.011 | -- |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 91 | -- |
| WATER TEMPERATURE (DEG C) | 21.3 | 19.5 |
| COLOR (PLATINUM-COBALT UNITS) | 25 | -- |
| SECCHI-DISC VISIBILITY (FT) | 3 | |
| DISSOLVED OXYGEN | 8.3 | 7.1 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 76-100 % |

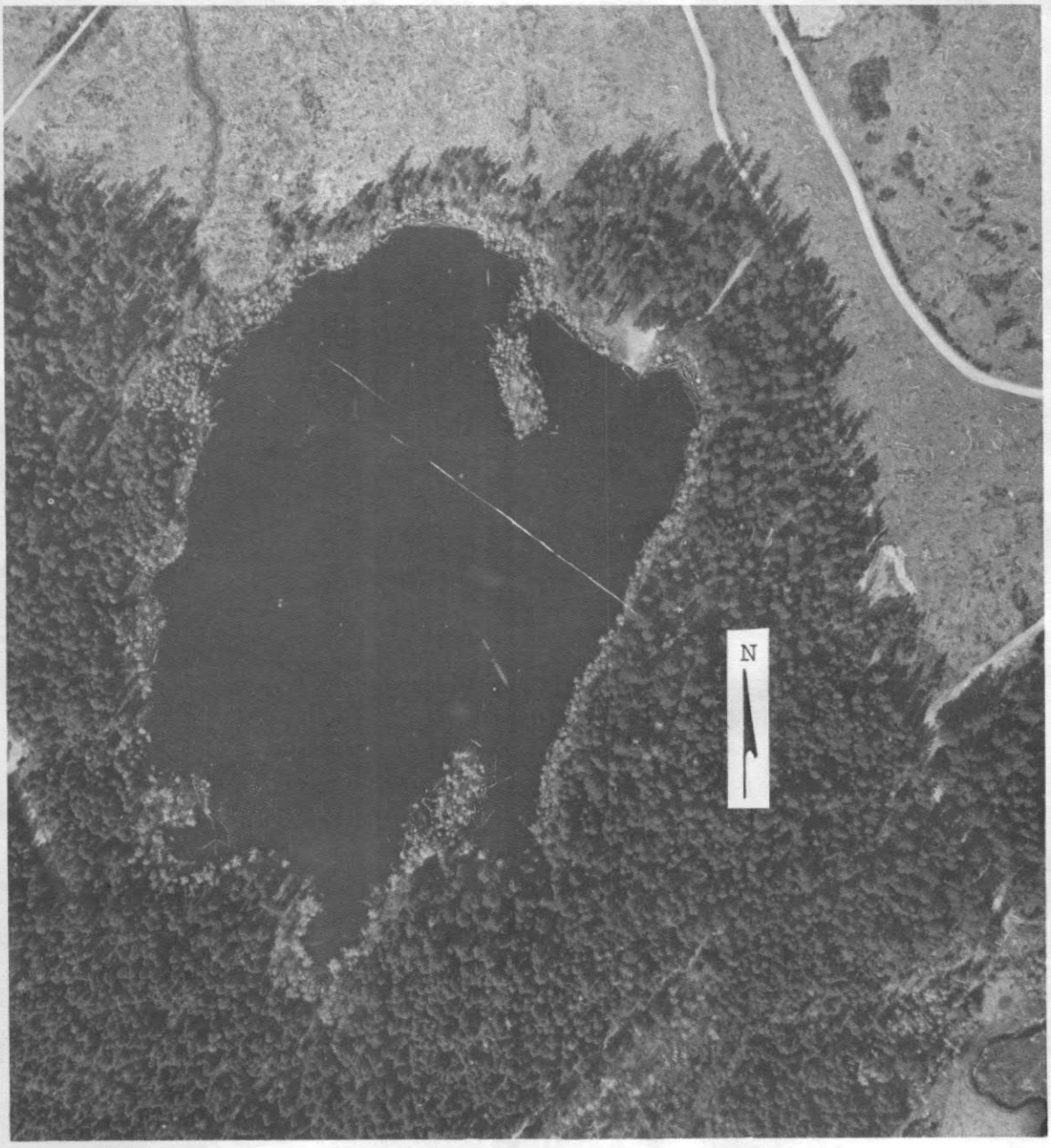
| | |
|---|---|
| DATE | 8/11/73 |
| TIME | 1520 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 2 |
| FECAL COLIFORM, MEAN (COL./100ML) | 1 |

REMARKS

A LARGE AREA OF THE LAKE IS LESS THAN 5 FEET DEEP. THE MUCK LITTORAL BOTTOM SUPPORTED A HEAVY COVER OF EMERSED AND SUBMERSED PLANTS. AT ONE TIME THE LAKE WAS REPORTED TO HAVE BEEN USED FOR THE COMMERCIAL PRODUCTION OF MUSKRATS. LOGS LITTERED THE SHORELINE.




Tule Lake, Pierce County. From Washington Department of Game, September 1955.




Tule Lake, Pierce County. April 3, 1973. Approx. scale 1:4800.

TWENTYSEVEN LAKE PIERCE COUNTY

LATITUDE 46°55'29" LONGITUDE 122°17' 0" T17N-R4E-27
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.14 SQ MI | RESIDENTIAL DEVELOPMENT | 18 % |
| ALTITUDE | 776. FT | | |
| LAKE AREA | 17. ACRES | NUMBER OF NEARSHORE HOMES | 5 |
| LAKE VOLUME | 180. ACRE-FT | | |
| MEAN DEPTH | 10. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 18. FT | | |
| SHORELINE LENGTH | 0.62 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 0 % |
| DEVELOPMENT OF VOLUME | 0.57 | AGRICULTURAL | 28 % |
| BOTTOM SLOPE | 1.8 % | FOREST OR UNPRODUCTIVE | 53 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 19 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | ABSENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1625 | 1630 |
| DEPTH (FT) | 3. | 11. |
| TOTAL NITRATE (N) | 0.02 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.06 | 0.09 |
| TOTAL ORGANIC NITROGEN (N) | 0.51 | 0.57 |
| TOTAL PHOSPHORUS (P) | 0.021 | 0.028 |
| TOTAL ORTHOPHOSPHATE (P) | 0.016 | 0.009 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 42 | 44 |
| WATER TEMPERATURE (DEG C) | 22.2 | 20.0 |
| COLOR (PLATINUM-COBALT UNITS) | 20 | 25 |
| SECCHI-DISC VISIBILITY (FT) | 6 | |
| DISSOLVED OXYGEN | 8.8 | 7.7 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 11- 25 % |

| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1640 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | 7 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 11 |
| FECAL COLIFORM, MEAN (COL./100ML) | 9 |

REMARKS

EMERSED PLANTS COVERED THE MARSHY SHORELINE. THE MUCK LITTORAL BOTTOM SUPPORTED A HEAVY COVER OF SUBMERSED PLANTS (WATER MILFOIL).


EXPLANATION

—10—

Line of equal
water depth
Interval 5 feet

Twentyseven Lake, Pierce County. Bathymetric map from
U.S. Geological Survey, June 13, 1973.
Aerial photo, April 3, 1973.

WAPATO LAKE PIERCE COUNTY

LATITUDE 47°11'34" LONGITUDE 122°27'20" T20N-R3E-29
PUGET SOUND BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 1.98 SQ MI | RESIDENTIAL DEVELOPMENT | 23 % |
| ALTITUDE | 314. FT | | |
| LAKE AREA | 28. ACRES | NUMBER OF NEARSHORE HOMES | 20 |
| LAKE VOLUME | 150. ACRE-FT | | |
| MEAN DEPTH | 5. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 13. FT | | |
| SHORELINE LENGTH | 1.2 MI | RESIDENTIAL URBAN | 79 % |
| SHORELINE CONFIGURATION | 1.7 | RESIDENTIAL SUBURBAN | 2 % |
| DEVELOPMENT OF VOLUME | 0.41 | AGRICULTURAL | 0 % |
| BOTTOM SLOPE | 1.0 % | FOREST OR UNPRODUCTIVE | 17 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 2 % |
| INFLOW | INTERMITTENT | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

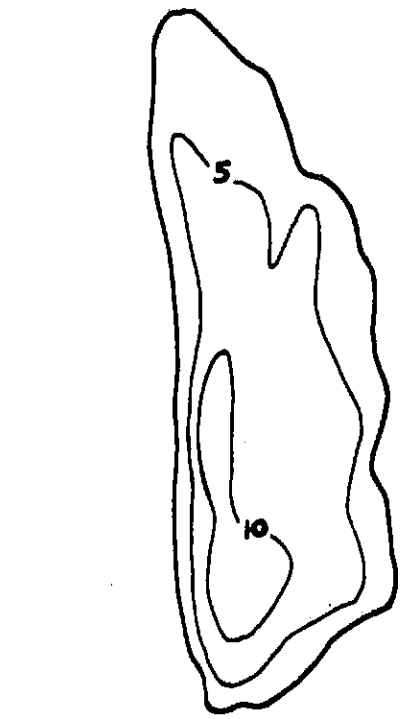
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1220 | 1225 |
| DEPTH (FT) | 3. | 7. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.07 | 0.11 |
| TOTAL ORGANIC NITROGEN (N) | 0.31 | 0.35 |
| TOTAL PHOSPHORUS (P) | 0.058 | 0.10 |
| TOTAL ORTHOPHOSPHATE (P) | 0.016 | 0.029 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 83 | 85 |
| WATER TEMPERATURE (DEG C) | 21.9 | 19.9 |
| COLOR (PLATINUM-COBALT UNITS) | 25 | 35 |
| SECCHI-DISC VISIBILITY (FT) | 6 | |
| DISSOLVED OXYGEN | 8.8 | 4.7 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 11- 25 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 11- 25 % |

| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1230 |
| NUMBER OF FECAL COLIFORM SAMPLES | 2 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | -- |
| FECAL COLIFORM, MEAN (COL./100ML) | -- |

REMARKS

AN URBAN LAKE LOCATED IN THE CITY OF TACOMA, A PARK BORDERS THE EAST SHORELINE AND THE LAKE RECEIVES HEAVY RECREATIONAL USE. EMERSED PLANTS WERE MAINLY AT THE NORTH END OF THE LAKE, BUT SUBMERSED PLANTS (WATER MILFOIL) COVERED MUCH OF THE LAKE BOTTOM. IN 1975 THE U.S. GEOLOGICAL SURVEY WILL SAMPLE THE LAKE PERIODICALLY.




N

0 500 1000 FEET

EXPLANATION

—10—

Line of equal
water depth
Interval 5 feet

Wapato Lake, Pierce County. From Washington Department of Game, September 30, 1946.


Wapato Lake, Pierce County. April 3, 1973. Approx. scale 1:4800.

WAUGHOP LAKE PIERCE COUNTY

LATITUDE 47*10' 9" LONGITUDE 122*33'41" T19N-R2E-4
PUGET SOUND BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.34 SQ MI | RESIDENTIAL DEVELOPMENT | 0 % |
| ALTITUDE | 230. FT | | |
| LAKE AREA | 33. ACRES | NUMBER OF NEARSHORE HOMES | 0 |
| LAKE VOLUME | 220. ACRE-FT | | |
| MEAN DEPTH | 7. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 14. FT | | |
| SHORELINE LENGTH | 0.86 MI | RESIDENTIAL URBAN | 7 % |
| SHORELINE CONFIGURATION | 1.1 | RESIDENTIAL SUBURBAN | 11 % |
| DEVELOPMENT OF VOLUME | 0.48 | AGRICULTURAL | 46 % |
| BOTTOM SLOPE | 1.0 % | FOREST OR UNPRODUCTIVE | 21 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 15 % |
| INFLOW | NONE VISIBLE | | |
| OUTFLOW CHANNEL | ABSENT | PUBLIC BOAT ACCESS TO LAKE | -- |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

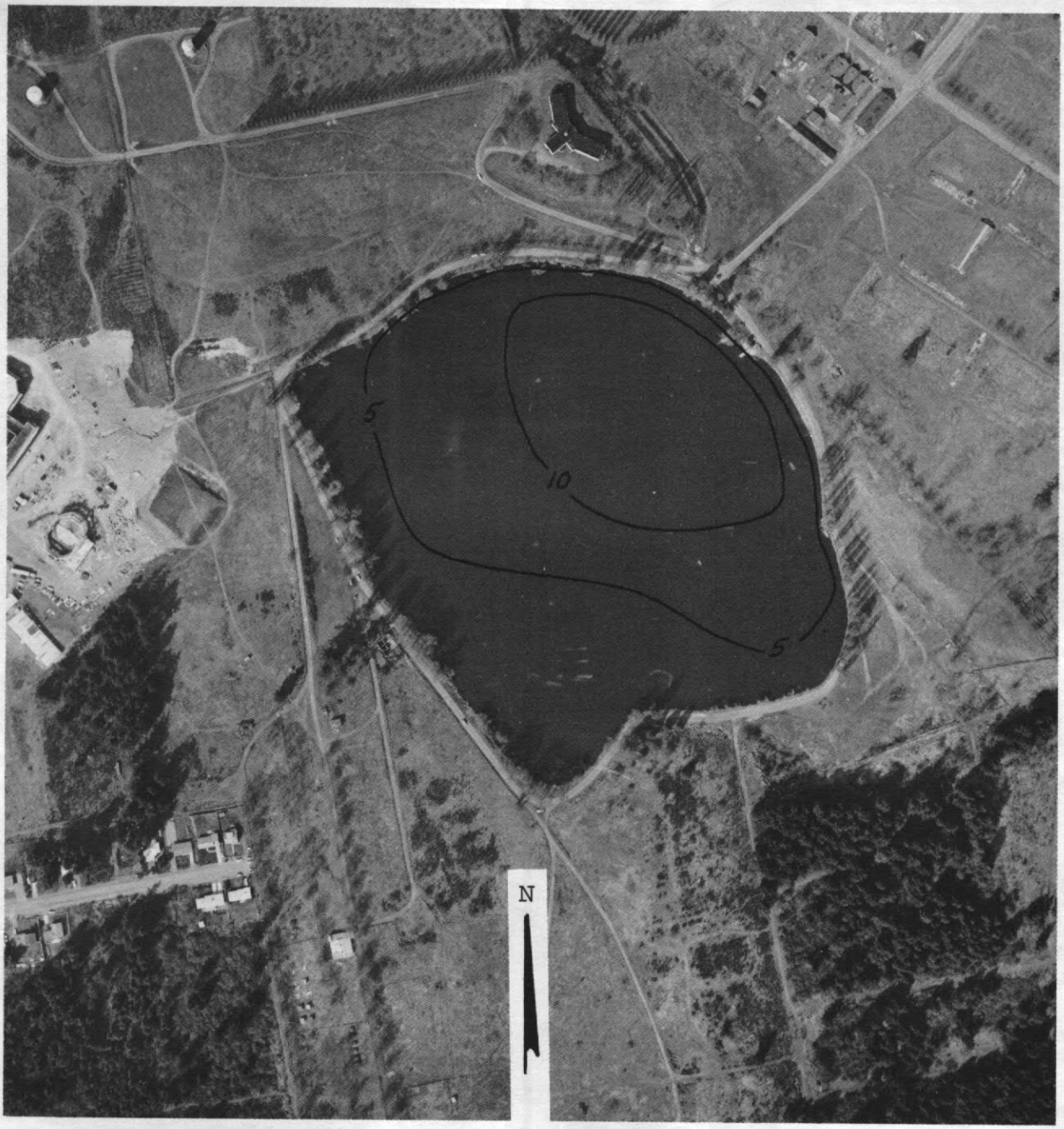
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1330 | 1335 |
| DEPTH (FT) | 3. | 7. |
| TOTAL NITRATE (N) | 0.01 | 0.01 |
| TOTAL NITRITE (N) | 0.01 | 0.00 |
| TOTAL AMMONIA (N) | 0.83 | 1.3 |
| TOTAL ORGANIC NITROGEN (N) | 3.5 | 2.0 |
| TOTAL PHOSPHORUS (P) | 0.60 | 0.55 |
| TOTAL ORTHOPHOSPHATE (P) | 0.35 | 0.44 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 110 | 117 |
| WATER TEMPERATURE (DEG C) | 22.8 | 20.3 |
| COLOR (PLATINUM-COBALT UNITS) | 45 | 45 |
| SECCHI-DISC VISIBILITY (FT) | 3 | |
| DISSOLVED OXYGEN | 9.2 | 0.3 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 26- 50 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1340 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | 8 |
| FECAL COLIFORM, MEAN (COL./100ML) | 6 |

REMARKS

THE LAKE IS LOCATED SOUTHWEST OF TACOMA NEAR FORT STEILACOOM COMMUNITY COLLEGE. AN ALGAL BLOOM WAS OBSERVED.




Waughop Lake, Pierce County. Bathymetric map from U.S. Geological Survey, June 11, 1973. Aerial photo, July 14, 1971.

WHITMAN LAKE PIERCE COUNTY

LATITUDE 46°57'54" LONGITUDE 122°15'18" T17N-R4E-14
NISQUALLY RIVER BASIN

| PHYSICAL DATA | | CULTURAL DATA | |
|---|---|---|---|
| DRAINAGE AREA | 0.97 SQ MI | RESIDENTIAL DEVELOPMENT | 85 % |
| ALTITUDE | 601. FT | | |
| LAKE AREA | 30. ACRES | NUMBER OF NEARSHORE HOMES | 46 |
| LAKE VOLUME | 350. ACRE-FT | | |
| MEAN DEPTH | 12. FT | LAND USE IN DRAINAGE BASIN | |
| MAXIMUM DEPTH | 20. FT | | |
| SHORELINE LENGTH | 0.95 MI | RESIDENTIAL URBAN | 0 % |
| SHORELINE CONFIGURATION | 1.2 | RESIDENTIAL SUBURBAN | 5 % |
| DEVELOPMENT OF VOLUME | 0.58 | AGRICULTURAL | 27 % |
| BOTTOM SLOPE | 1.5 % | FOREST OR UNPRODUCTIVE | 63 % |
| BASIN GEOLOGY | SED./META. | LAKE SURFACE | 5 % |
| INFLOW | INTERMITTENT | | |
| OUTFLOW CHANNEL | PRESENT | PUBLIC BOAT ACCESS TO LAKE | YES |

WATER-QUALITY DATA (IN MG/L UNLESS OTHERWISE INDICATED)

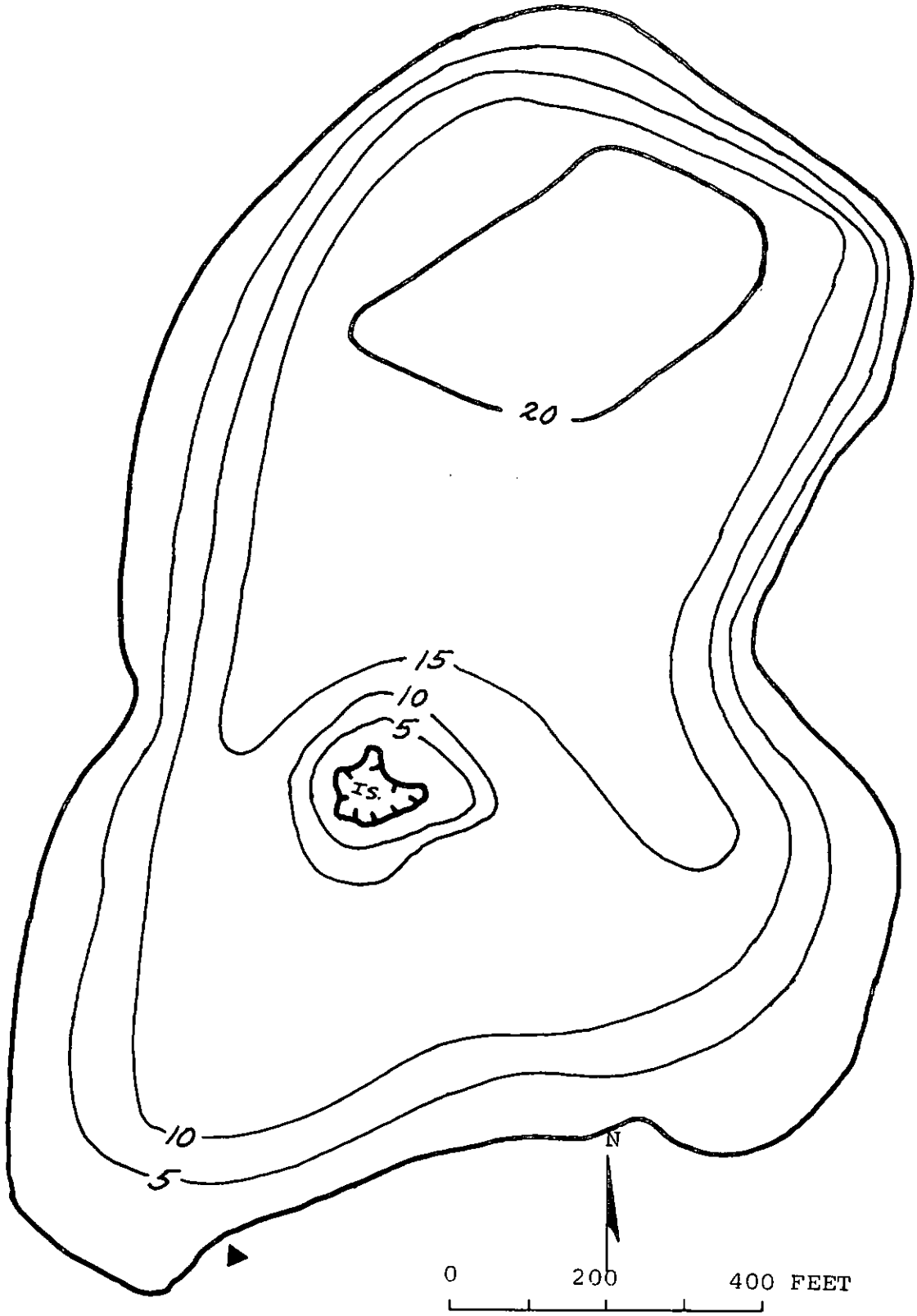
| SAMPLE SITE | 1 | |
|---|---|---|
| DATE | 8/10/73 | |
| TIME | 1445 | 1450 |
| DEPTH (FT) | 3. | 14. |
| TOTAL NITRATE (N) | 0.32 | 0.36 |
| TOTAL NITRITE (N) | 0.00 | 0.00 |
| TOTAL AMMONIA (N) | 0.09 | 0.16 |
| TOTAL ORGANIC NITROGEN (N) | 0.21 | 0.14 |
| TOTAL PHOSPHORUS (P) | 0.013 | 0.054 |
| TOTAL ORTHOPHOSPHATE (P) | 0.005 | 0.031 |
| SPECIFIC CONDUCTANCE (MICROMHOS) | 81 | 104 |
| WATER TEMPERATURE (DEG C) | 22.0 | 16.7 |
| COLOR (PLATINUM-COBALT UNITS) | 15 | 30 |
| SECCHI-DISC VISIBILITY (FT) | 13 | |
| DISSOLVED OXYGEN | 9.0 | 0.4 |

| | |
|---|---|
| LAKE SHORELINE COVERED BY EMERSED PLANTS | 76-100 % |
| LAKE SURFACE COVERED BY EMERSED PLANTS | 1- 10 % |

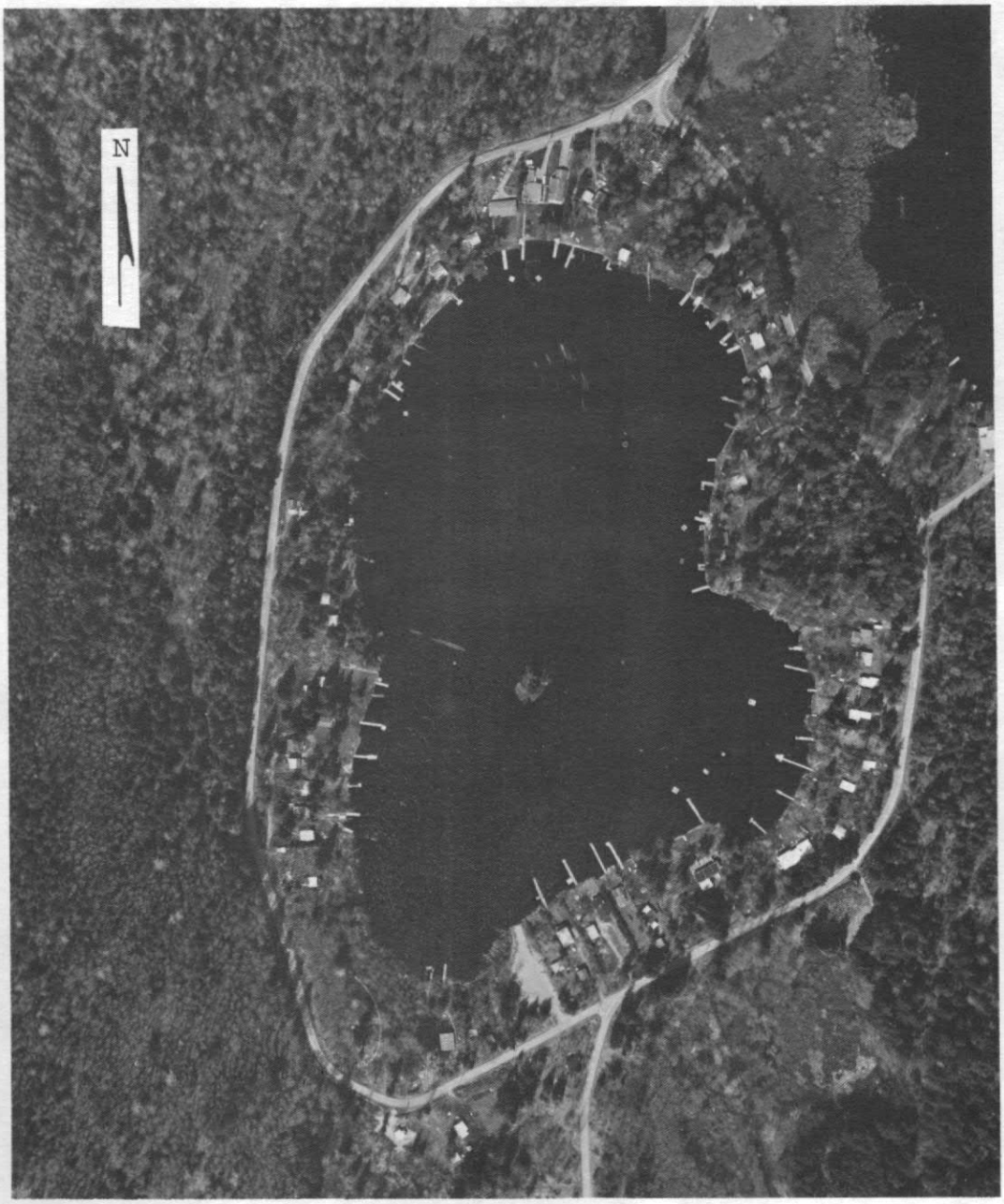
| | |
|---|---|
| DATE | 8/10/73 |
| TIME | 1500 |
| NUMBER OF FECAL COLIFORM SAMPLES | 3 |
| FECAL COLIFORM, MINIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MAXIMUM (COL./100ML) | <1 |
| FECAL COLIFORM, MEAN (COL./100ML) | <1 |

REMARKS

LARGEST OF THE BENBOW GROUP OF LAKES. THE LAKE IS FED BY THE TWIN LAKES. EMERSED PLANTS COVERED APPROXIMATELY 80 PERCENT OF THE SHORELINE WITH SOME LARGE PATCHES OF PLANTS AT THE SOUTH END OF THE LAKE. THE MUCK LITTORAL BOTTOM SUPPORTED A HEAVY COVER OF SUBMERSED PLANTS (ELODEA AND PONDWEED).




Whitman Lake, Pierce County. From
U.S. Geological Survey, May 2, 1973.




Whitman Lake, Pierce County. April 3, 1973. Approx. scale 1:4800.